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Air Pollution Regulations in State Implementation Plans: Maryland

Abcor Inc, Wilmington, MA Walden Div

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Maryland

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This document has been produced in compliance with Section 110(h)(1) of the Clean Air Act amendments of 1977. The Federally enforceable regulations contained in the State Implementation Plans (SIPs) have been compiled for all 56 States and territories (with the exception of the Northern Mariana Islands). They consist of both the Federally approved State and/or local air quality regulations as indicated in the Federal Register and the Federally promulgated regulations for the State, as indicated in the Federal Register. Regulations which fall into one of the above categories as of January 1, 1978, have been incorporated. As mandated by Congress, this document will be updated annually. State and/or local air quality regulations which have not been Federally approved as of January 1, 1978, are not included here; omission of these regulations from this document in no way affects the ability of the respective Federal, State, or local agencies to enforce such regulations.

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Maryland

by

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Wilmington, Massachusetts

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EPA Project Officer: Bob Schell

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Office of Air, Noise, and Radiation
Office of Air Quality Planning and Standards
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Publication No. EPA-450/3-78-070

INTRODUCTION

This document has been produced in compliance with Section 110(h)(1) of the Clean Air Act Amendments of 1977. The Federally enforceable regulations contained in the State Implementation Plans (SIPs) have been compiled for all 56 States and territories (with the exception of the Northern Mariana Islands). They consist of both the Federally approved State and/or local air quality regulations as indicated in the Federal Register and the Federally promulgated regulations for the State, as indicated in the Federal Register. Regulations which fall into one of the above categories as of January 1, 1978, have been incorporated. As mandated by Congress, this document will be updated annually. State and/or local air quality regulations which have not been Federally approved as of January 1, 1978, are not included here; omission of these regulations from this document in no way affects the ability of the respective Federal, State, or local agencies to enforce such regulations.

There have been recent changes in the Federal enforceability of parking management regulations and indirect source regulations. The October, 1977, appropriation bill for EPA prohibited Federal enforcement of parking management regulations in the absence of specific Federal authorizing legislation. Federally promulgated parking management regulations have, therefore, been suspended indefinitely. Pursuant to the 1977 Clean Air Act Amendments, indirect source regulations may not be required for the approval of a given SIP. Consequently, any State adopted indirect source regulations may be suspended or revoked; State adopted indirect source regulations contained in an applicable SIP are Federally enforceable. More importantly, EPA may only promulgate indirect source review regulations which are specific to Federally funded, operated, or owned facilities or projects. Therefore, the Federally promulgated indirect source regulations appearing in this document are not enforceable by EPA except as they relate to Federal facilities.

Since State air quality regulations vary widely in their organization, content, and language, a standardized subject index is utilized in this document. Index listings consist of both contaminant and activity oriented categories to facilitate usage. For example, for regulations which apply to copper smelters, one might look under sulfur compounds (50.2), particulate matter process weight (50.1.1), or copper smelters (51.15). Federal regulations pertaining to a given State immediately follow the approved State and local regulations.

Additionally, a summary sheet of the information included in each comprehensive document is presented prior to the regulatory text to allow one to quickly assess the contents of the document. Specifically, the summary sheets contain the date of submittal to EPA of each revision to the SIP and the date of the Federal Register in which the revision was either approved or disapproved by EPA. Finally, a brief description or reference of the regulation which was submitted is also included.

This document is not intended to provide a tool for determining the enforceability of any given regulation. As stated above, it is intended to provide a comprehensive compilation of those regulations which are incorporated directly or by reference into Title 40, Part 52, of the Code of Federal Regulations. Consequently, the exclusion of a Federally approved regulation from this document does not diminish the enforceability of the regulation. Similarly, the inclusion of a given regulation (for example, regulations governing pollutants, such as odors, for which there is no national ambient air quality standards) in this document does not, in itself, render the regulation enforceable.

SUMMARY SHEET

OF

EPA-APPROVED REGULATION CHANGES

MARYLAND

Submittal Date	Approval Date	Description
4/4/72	5/31/72	Reg. 10.03.35-10.03.41 Note: Reg. 10.03.38 for the Metropolitan Baltimore Intrastate Region and Reg. 10.03.39 for the Maryland Portion of the National Capital Interstate Region are disapproved
12/11/74	12/5/75	Regs. 10.03.36 thru 10.03.41 deleting subsection .04B (3) Note: Temporary approval of deletion of 10.03.38 04B (3)
4/24/74	6/30/76	Reg. 10.03.38 04J and 10.03.39 .04J
7/1/75	7/29/76	Regs. 10.03.37, 10.03.40, and 10.03.41. Sections .04B (1) and .04B (2)
12/11/74	12/15/76	Regs. 10.03.36, 10.03.37, 10.03.39, 10.03.40 and 10.03.41 deleting subsection .04B (3)

DOCUMENTATION OF CURRENT EPA-APPROVED
STATE AIR POLLUTION REGULATIONS

REVISED STANDARD SUBJECT INDEX

- 1.0 DEFINITIONS
- 2.0 GENERAL PROVISIONS AND ADMINISTRATIVE PROCEDURES
- 3.0 REGISTRATION CERTIFICATES, OPERATING PERMITS AND APPLICATIONS
- 4.0 AIR QUALITY STANDARDS (PRIMARY AND SECONDARY)
  - 4.1 PARTICULATES
  - 4.2 SULFUR DIOXIDE
  - 4.3 NITRIC OXIDES
  - 4.4 HYDROCARBONS
  - 4.5 CARBON MONOXIDE
  - 4.6 OXIDANTS
  - 4.7 OTHERS
- 5.0 VARIANCES
- 6.0 COMPLIANCE SCHEDULES
- 7.0 EQUIPMENT MALFUNCTION AND MAINTENANCE
- 8.0 EMERGENCY EPISODES
- 9.0 AIR QUALITY SURVEILLANCE AND SOURCE TESTING
- 10.0 NEW SOURCE PERFORMANCE STANDARDS
- 11.0 NATIONAL EMISSIONS STANDARDS FOR HAZARDOUS AIR POLLUTANTS
- 12.0 MOTOR VEHICLE EMISSIONS AND CONTROLS
- 13.0 RECORD KEEPING AND REPORTING
- 14.0 PUBLIC AVAILABILITY OF DATA
- 15.0 LEGAL AUTHORITY AND ENFORCEMENT
- 16.0 HEARINGS, COMPLAINTS, AND INVESTIGATIONS
- 17.0 PREVENTION OF SIGNIFICANT DETERIORATION
- 18.0 AIR QUALITY MAINTENANCE AREA
- 19.0 - 49.0 RESERVED FOR FUTURE EXPANSION OF COMMON INDEX
- 50.0 POLLUTANT - SPECIFIC REGULATIONS
  - 50.1 PARTICULATES
    - 50.1.1 PROCESS WEIGHT
    - 50.1.2 VISIBLE EMISSIONS
    - 50.1.3 GENERAL

50.2 SULFUR COMPOUNDS

50.3 NITRIC OXIDES

50.4 HYDROCARBONS

50.5 CARBON MONOXIDE

50.6 ODOROUS POLLUTANTS

50.7 OTHERS (Pb, Hg, etc.)

51.0 SOURCE CATEGORY SPECIFIC REGULATIONS

51.1 AGRICULTURAL PROCESSES (includes Grain Handling, Orchard Heaters, Rice and Soybean Facilities, Related Topics)

51.2 COAL OPERATIONS (includes Cleaning, Preparation, Coal Refuse Disposal Areas, Coke Ovens, Charcoal Kilns, Related Topics)

51.3 CONSTRUCTION (includes Cement Plants, Materials Handling, Topics Related to Construction Industry)

51.4 FERROUS FOUNDRIES (includes Blast Furnaces, Related Topics)

51.5 FUEL BURNING EQUIPMENT (coal, natural gas, oil) - Particulates (includes Fuel Content and Other Related Topics)

51.6 FUEL BURNING EQUIPMENT (coal, natural gas, oil) - SO_2 (includes Fuel Content and Other Related Topics)

51.7 FUEL BURNING EQUIPMENT (oil, natural gas, coal) - NO_2 (includes Fuel Content and Other Related Topics)

51.8 HOT MIX ASPHALT PLANTS

51.9 INCINERATION

51.10 NITRIC ACID PLANTS

51.11 NON-FERROUS SMELTERS (Zn, Cu, etc.) - Sulfur Dioxide

51.12 NUCLEAR ENERGY FACILITIES (includes Related Topic)

51.13 OPEN BURNING (includes Forest Management, Forest Fire, Fire Fighting Practice, Agricultural Burning and Related Topics)

51.14 PAPER PULP; WOOD PULP AND KRAFT MILLS (includes Related Topics)

51.15 PETROLEUM REFINERIES

51.16 PETROLEUM STORAGE (includes Loading, Unloading, Handling and Related Topics)

51.17 SECONDARY METAL OPERATIONS (includes Aluminum, Steel and Related Topics)

51.18 SULFURIC ACID PLANTS

51.19 SULFURIC RECOVERY OPERATIONS

51.20 WOOD WASTE BURNERS

51.21 MISCELLANEOUS TOPICS

TABLE OF CONTENTS

STATE REGULATIONS

Revised Standard Subject Index	Section Number	Title	Page
-	10.03.35	Regulations Governing the Control of Air Pollution in the State of Maryland	1
(1.0)	01	Definitions	1
(2.0)	02	Delineation of Areas	5
(8.0)	03	Air Pollution Episode System	5
(3.0)	04	Prior Registration of Proposed Installations	13
(3.0)	05	Registration of Existing Installations	14
(9.0)	06	Testing and Monitoring	15
(7.0)	07	Malfunction of An Installation	16
(6.0)	08	Penalties and Plan for Compliance	16
(12.0)	09	Motor Vehicle Emissions	16
(13.0)	10	Records and Information	16
(3.0)	11	Permits	17

Garrett, Allegany and Washington Counties Regulations

Revised Standard Subject Index	Section Number	Title	Page
-	10.03.36	Regulations Governing the Control of Air Pollution in Area I	30
(51.13)	01	Control and Prohibition of Open Fires	30
(50.1.2)	02	Control and Prohibition of Visible Emissions	32
(50.1)	03	Control and Prohibition of Particulate Matter Emissions	34

Revised Standard Subject Index	Section Number	Title	Page
(50.1)	03A	General Conditions	34
(51.5)	03B	Control of Particulate Matter From Fuel Burning Plants and Installations	34
(51.9)	03C	Particulate Matter From Incineration Plants and Installations	35
(51.1)	03D	Particulate Matter From Agricultural Operations	36
(50.1.1)	03E	Particulate Matter From Other Plants and Installations	36
(51.3)	03F	Particulate Matter From Materials Handling and Construction and Other Acts	37
-	04	Control and Prohibition of Gas, Vapor and Odor Emissions	38
(2.0)	04A	General	38
(51.6)	04B	Sulfur Oxides From the Burning of Fuel	38
(50.2)	04C	Sulfur Compounds From Other than Fuel Burning Installations	39
(2.0)	04D	Exceptions	39
(9.0)	04E	Request for Analysis	40
(50.6)	04F	Control of Odors From the Reduction of Offal and Vegetable Oil	40
(51.7)	04G	Nitrogen Oxides From New Fuel Burning Equipment	41
(51.10)	04H	Nitrogen Oxides From Nitric Acid Plants	41
(4.0)	05	Ambient Air Quality Standards	41
(2.0)	06	Control and Prohibition of Installations and Operations	48
(2.0)	07	Transition From Previous Regulations	49

Frederick County Regulations

Revised Standard Subject Index	Section Number	Title	Page
-	10.03.37	Regulations Governing the Control of Air Pollution in Area II	51
(51.13)	01	Control and Prohibition of Open Fires	51
(50.1.2)	02	Control and Prohibition of Visible Emissions	53
(50.1)	03	Control and Prohibition of Particulate Matter Emissions	55
(50.1)	03A	General Conditions	55
(51.5)	03B	Control of Particulate Matter From Fuel Burning Plants and Installations	55
(51.9)	03C	Particulate Matter From Incineration Plants and Installations	56
(51.1)	03D	Particulate Matter From Agricultural Operations	57
(50.1.1)	03E	Particulate Matter From Other Plants and Installations	57
(51.3)	03F	Particulate Matter From Materials Handling and Construction and Other Acts	59
-	04	Control and Prohibition of Gas, Vapor and Odor Emissions	59
(2.0)	04A	General	59
(51.6)	04B	Sulfur Oxides From the Burning of Fuel	60
(50.2)	04C	Sulfur Compounds From Other Than Fuel Burning Installations	60
(2.0)	04D	Exceptions	60

Revised Standard Subject Index	Section Number	Title	Page
(9.0)	04E	Request for Analysis	61
(50.6)	04F	Control of Odors From the Reduction of Offal and Vegetable Oil	61
(51.7)	04G	Nitrogen Oxides From New Fuel Burning Equipment	62
(51.10)	04H	Nitrogen Oxides From Nitric Acid Plants	62
(4.0)	05	Ambient Air Quality Standards	63
(2.0)	06	Control and Prohibition of Installations and Operations	69
(2.0)	07	Transition From Previous Regulations	71

Baltimore City, Anne Arundel, Baltimore, Carroll, Harford and Howard Counties Regulations

Revised Standard Subject Index	Section Number	Title	Page
-	10.03.38	Regulations Governing the Control of Air Pollution in Area III	72
(51.13)	01	Control and Prohibition of Open Fires	72
(50.1.2)	02	Control and Prohibition of Visible Emissions	74
(50.1)	03	Control and Prohibition of Particulate Matter Emissions	75
(50.1)	03A	General Conditions	75
(51.5)	03B	Control of Particulate Matter From Fuel Burning Installations	75
(51.9)	03C	Particulate Matter From Incinerators	76
(51.1)	03D	Particulate Matter From Grain Drying Installations	76

Revised Standard Subject Index	Section Number	Title	Page
(50.1.1)	03E	Particulate Matter From Other Installations	76
(51.3)	03F	Particulate Matter From Materials Handling and Construction	77
-	04	Control and Prohibition of Gas, Vapor and Odor Emissions	78
(2.0)	04A	General	78
(51.6)	04B	Sulfur Oxides From the Burning of Fuel	78
(50.2)	04C	Sulfur Compounds From Other Than Fuel Burning Installations	78
(2.0)	04D	Exceptions	78
(9.0)	04E	Request For Analysis	79
(50.6)	04F	Control of Odors From the Reduction of Offal and Vegetable Oil	79
(51.7)	04G	Nitrogen Oxides From Fuel Burning Equipment	80
(51.10)	04H	Nitrogen Oxides From Nitric Acid Plants	81
(50.5)	04I	Carbon Monoxide From Other Than Fuel Burning Installations	81
(50.4)	04J	Hydrocarbons From Other Than Fuel Burning Installations	82
(4.0)	05	Ambient Air Quality Standards	89
(2.0)	06	Control and Prohibition of Installations and Operations	95
(2.0)	07	Transition From Previous Regulations	97

Montgomery and Prince George's Counties Regulations

Revised Standard Subject Index	Section Number	Title	Page
-	10.03.39	Regulations Governing the Control of Air Pollution in Area IV	104
(51.13)	01	Control and Prohibition of Open Fires	104
(50.1.2)	02	Control and Prohibition of Visible Emissions From Installations	106
(50.1)	03	Control and Prohibition of Particulate Matter Emissions	107
(50.1)	03A	General Conditions	107
(51.5)	03B	Control of Particulate Matter From Fuel Burning Installations	107
(51.9)	03C	Particulate Matter From Incinerators	108
(51.1)	03D	Particulate Matter From Grain Drying Installations	108
(50.1.1)	03E	Particulate Matter From Other Installations	108
(51.3)	03F	Particulate Matter From Materials Handling and Construction and Other Acts	109
-	04	Control and Prohibition of Gas, Vapor and Odor Emissions	109
(2.0)	04A	General	109
(51.6)	04B	Sulfur Oxides From the Burning of Fuel	110
(50.2)	04C	Sulfur Compounds From Other Than Fuel Burning Installations	110
(2.0)	04D	Exceptions	110
(9.0)	04E	Request for Analysis	111

Revised Standard Subject Index	Section Number	Title	Page
(50.6)	04F	Control of Odors From the Reduction of Offal and Vegetable Oil	111
(51.7)	04G	Nitrogen Oxides From Fuel Burning Equipment	112
(51.10)	04H	Nitrogen Oxides from Nitric Acid Plants	112
(50.5)	04I	Carbon Monoxide From Other Than Fuel Burning Installations	112
(50.4)	04J	Hydrocarbons From Other Than Fuel Burning Installations	113
(4.0)	05	Ambient Air Quality Standards	120
(2.0)	06	Control and Prohibition of Installations and Operations	126
(2.0)	07	Transition From Previous Regulations	128

Calvert, Charles and St. Mary's Counties Regulations

Revised Standard Subject Index	Section Number	Title	Page
-	10.03.40	Regulations Governing the Control of Air Pollution in Area V	136
(51.13)	01	Control and Prohibition of Open Fires	136
(50.1.2)	02	Control and Prohibition of Visible Emissions	138
(50.1)	03	Control and Prohibition of Particulate Matter Emissions	139
(50.1)	03A	General Conditions	139
(51.5)	03B	Control of Particulate Matter From Fuel Burning Plants and Installations	140

Revised Standard Subject Index	Section Number	Title	Page
(51.9)	03C	Particulate Matter From Incineration Plants and Installations	141
(51.1)	03D	Particulate Matter From Agricultural Operations	142
(50.1.1)	03E	Particulate Matter From Other Plants and Installations	142
(51.3)	03F	Particulate Matter From Materials Handling and Construction and Other Acts	143
-	04	Control and Prohibition of Gas, Vapor and Odor Emissions	144
(2.0)	04A	General	144
(51.6)	04B	Sulfur Oxides From the Burning of Fuel	144
(50.2)	04C	Sulfur Compounds From Other Than Fuel Burning Installations	145
(2.0)	04D	Exceptions	145
(9.0)	04E	Request for Analysis	145
(50.6)	04F	Control of Odors From the Reduction of Offal and Vegetable Oil	146
(51.7)	04G	Nitrogen Oxides From New Fuel Burning Equipment	147
(51.10)	04H	Nitrogen Oxides From Nitric Acid Plants	147
(4.0)	05	Ambient Air Quality Standards	147
(2.0)	06	Control and Prohibition of Installations and Operations	154
(2.0)	07	Transition From Previous Regulations	155

Caroline, Cecil, Dorchester, Kent, Queen Anne's, Somerset, Talbot, Wicomico and Worcester Counties Regulations

Revised Standard Subject Index	Section Number	Title	Page
-	10.03.41	Regulations Governing the Control of Air Pollution in Area VI	162
(51.13)	01	Control and Prohibition of Open Fires	162
(50.1.2)	02	Control and Prohibition of Visible Emissions	164
(50.1)	03	Control and Prohibition of Particulate Matter Emissions	166
(50.1)	03A	General Conditions	166
(51.5)	03B	Control of Particulate Matter From Fuel Burning Plants and Installations	166
(51.9)	03C	Particulate Matter From Incineration Plants and Installations	167
(51.1)	03D	Particulate Matter From Agricultural Operations	168
(50.1.1)	03E	Particulate Matter From Other Plants and Installations	169
(51.3)	03F	Particulate Matter From Materials Handling and Construction and Other Acts	170
-	04	Control and Prohibition of Gas, Vapor and Odor Emissions	170
(2.0)	04A	General	170
(51.6)	04B	Sulfur Oxides From the Burning of Fuel	171
(50.2)	04C	Sulfur Compounds From Other Than Fuel Burning Installations	171
(2.0)	04D	Exceptions	171

Revised Standard Subject Index	Section Number	Title	Page
(9.0)	04E	Request for Analysis	172
(50.6)	04F	Control of Odors From the Reduction of Offal and Vegetable Oil	172
(51.7)	04G	Nitrogen Oxides From New Fuel Burning Equipment	173
(51.10)	04H	Nitrogen Oxides From Nitric Acid Plants	173
(4.0)	05	Ambient Air Quality Standards	173
(2.0)	06	Control and Prohibition of Installations and Operations	180
(2.0)	07	Transition From Previous Regulations	181

Federally Promulgated Regulations

Revised Standard Subject Index	Section Number	Title	Page
(10.0)	52.1076	Review of New Sources and Modifications	189
(10.0)	52.1076	Review of New or Modified Indirect Sources	190
(9.0)	52.1077	Source Surveillance	200
(6.0)	52.1080	Compliance Schedules	201
(51.16)	52.1086	Gasoline Transfer Vapor Control	205
(51.16	52.1087	Control of Evaporative Losses From the Filling of Vehicular Tanks	207
(51.21)	52.1088	Control of Dry Cleaning Solvent Evaporation	209
(12.0)	52.1089	Inspection and Maintenance Program	210

Revised Standard Subject Index	Section Number	Title	Page
(12.0)	52.1090	Bicycle Lanes and Bicycle Storage Facilities	212
(12.0)	52.1091	Medium-Duty Air/Fuel Control Retrofit	215
(12.0)	52.1092	Heavy-Duty Air/Fuel Control Retrofit	217
(12.0)	52.1093	Oxidizing Catalyst Retrofit	218
(12.0)	52.1094	Vacuum Spark Advance Disconnect Retrofit	220
(12.0)	52.1095	Inspection and Maintenance Program	222
(12.0)	52.1096	Vacuum Spark Advance Disconnect Retrofit	224
(12.0)	52.1097	Oxidizing Catalyst Retrofit - Baltimore	226
(12.0)	52.1098	Light-Duty Air/Fuel Control Retrofit	228
(12.0)	52.1099	Medium-Duty Air/Fuel Control Retrofit	230
(12.0)	52.1100	Heavy-Duty Air/Fuel Control Retrofit	231
(51.16)	52.1101	Gasoline Transfer Vapor Control	233
(51.16)	52.1102	Control of Evaporative Losses From the Filling of Vehicular	236
(12.0)	52.1103	Management of Parking Supply	239
(12.0)	52.1104	Carpool Commuter Matching System	241
(12.0)	52.1105	Employer's Provision For Mass Transit Priority Incentives	243
(12.0)	52.1106	Study and Establishment of Bikeways in the Baltimore Area	245

Revised Standard Subject Index	Section Number	Title	Page
(51.21)	52.1107	Control of Dry Cleaning Solvent Evaporation	247
(12.0)	52.1108	Exclusive Bus Lanes For Baltimore Suburbs and Outlying Areas	248
(12.0)	52.1109	Regulation for Limitation of Public Parking	250
(12.0)	52.1111	Management of Parking Supply	252
(14.0)	52.1113	General Requirements	256
(17.0)	52.1116	Prevention of Significant Deterioration	257

Maryland State Department of Health and Mental Hygiene
301 West Preston Street
Baltimore, Maryland 21201

(As Amended Through: March 13, 1972)

10.03.35 Regulations Governing the Control of Air Pollution in the State of Maryland

Pursuant to the authority conferred upon the Secretary of Health and Mental Hygiene by Article 43, Section 697 of the Annotated Code of Maryland, 1957 Edition, and Supplement, the following regulations governing the control of air pollution in the State of Maryland or in various areas are hereby established as requirements of the Department of Health and Mental Hygiene.

PREFACE

The Air Quality Control Act of the State of Maryland declares as policy the maintenance of that degree of purity of the air resources of the State which will protect the health and welfare and property of the people of the State. It requires that the Department shall assume responsiblity for the jurisdiction over emissions into the air, shall prepare regulations for control of air pollution, including the establishment of standards for emissions and ambient air quality, for adoption by the Secretary of Health and Mental Hygiene. Enforcement of the standards is the responsiblity of the Department in all areas, using the facilities and services of local agencies within the areas to the maximum extent possible.

Air Pollution Control regulations consist of two (2) parts. These regulations, 10.03.35, are general and pertain to all areas of Maryland. Additional numbered regulations in this series pertain specifically to areas specified therein.

(1.0) ___01 DEFINITIONS

___01A "Air Pollution" shall mean the presence in the outdoor atmosphere of substances in quantities, having characteristics and being of a duration which, from any single source or in combination with other sources, are, or may be predicted with reasonable certainty to be injurious to human, plant or animal life or to property, or which unreasonably interfere with the proper enjoyment of the property of others by reason of the emission of odors, solids, vapors, liquids, or gases, throughout the State and in such areas of the State as are affected thereby.

___01B "Atmospheric Stagnation" shall mean a measure of the inability of the atmosphere to adequately dilute and disperse pollutants emitted into it, based on values of specific meteorological parameters of the microscale, mesoscale and microscale features. This definition would include a national, regional or Department forecasted air stagnation advisory (ASA), describing an atmospheric stagnation which satisfies the criteria established by the National Meteorological Center as set forth in Environmental Science Service Administration Technical memorandum

WBTM-NMC 47 published by the Department of Commerce, May, 1970.

___01C "Board" shall mean the State Board of Health and Mental Hygiene.

___01D "Chemical and Allied Products Industries" shall mean establishments engaged in the manufacture of (1) basic chemicals such as acids, alkalies, salts, industrial gases and organic chemicals, (2) chemical products to be used in further manufacturing such as synthetic fibers, plastics, dry colors and pigments, (3) finished chemical products to be used for ultimate consumption such as drugs, cosmetics, soap, paints, fertilizers and explosives. Standard Industrial Classification, Major Group 28.

___01E "Coefficient of Haze" (COH or COHS) shall mean that quantity of particulate material which produces an optical density of 0.01 when measured by light transmission at 400 millimicrons and when compared to the transmission of dust-free filter paper taken as 100%. Smoke concentration shall be expressed in terms of the number of COH units per 1000 linear feet of air drawn through the filter.

___01F "Commissioner" shall mean the Commissioner of the Department.

___01G "Control Equipment" shall mean any device or contrivance which prevents or reduces emissions.

___01H "Control Officer" shall mean a Deputy State Health Officer of the Department, the Commissioner of Health of the City of Baltimore, or any employee of the Department designated by the Commissioner.

___01I "Council" shall mean the Air Quality Control Advisory Council.

___01J "Department" shall mean the Department of Health and Mental Hygiene.

___01K "Distillate Fuel Oil" shall mean all other American Society for Testing and Materials numbered fuel oils other than residual.

___01L "Emergency" shall mean a sudden, unexpected and unforeseen condition of such public gravity and exigency as to require immediate action, or a condition which is predicted with reasonable certainty to require immediate action to carry out the purposes of this subtitle.

___01M "Emissions" shall mean any substance, other than water in an uncombined form, discharged directly or indirectly into the atmosphere including but not limited to odors, particulate matter, vapors, or gases or any combination thereof.

___01N "Fluorides" shall mean any matter containing the element fluorine in a combined form.

___01O "Fuel Burning Equipment" shall mean any furnace, boiler apparatus, stack or appurtenances thereto used in the process of burning fuel or other combustible material for the primary purpose of producing heat or power by indirect transfer.

___01P "Glass, Clay and Concrete Products Industries" shall mean establishments engaged in manufacture of glass, glassware, textile fibers, glass insulation, wool, structured clay products, concrete products, gypsum and plastic products, lime abrasives and asbestos. Standard Industrial Classification, Major Group 32.

___01Q "Hazardous Material" shall mean those substances (such as some types of explosives) which are dangerous and should be destroyed by open burning under controlled conditions when it has been established that disposal by land filling or burning in an incinerator perpetuates or increases the danger involved.

___01R "I.I.A. Standards" shall mean the standards published by the Incinerator Institute of America in the document entitled "I.I.A. Incinerator Standards" (1968).

___01S "Incinerator" shall mean any equipment, device or contrivance used for the destruction of garbage, rubbisn or other wastes by burning.

___01T "Installation" shall mean any article, machine, equipment, or other contrivance, including but not limited to emission control equipment, processing equipment, manufacturing equipment, fuel burning equipment, incinerators, or any equipment, or construction, capable of generating, causing or reducing emissions.

___01U "Modified Installation" shall mean any installation which is altered, changed or added to in such a manner so that it may cause or result in a significant change in the quantity or quality of emissions. In questionable cases, the determination of significant change shall be made by the Control Officer.

___01V "Multiple-Chamber Incinerator" shall mean any article, machine, equipment, contrivance, structure or part of a structure consisting of three or more refractory-lined combustion chambers in series, physically separated by refractory walls and interconnected by gas passage ports or ducts that is used to dispose of waste materials by burning.

___01W "Odor" shall mean that property of an emission which stimulates the sense of smell.

___01X "Offal" shall mean the refuse from slaughtered or salvageable dead animals, crustaceans, or any other animal form, such as but not limited to heads, feet, viscera, hair, blood, feathers, bones, scales or oils.

___01Y "Open Fire" shall mean a fire where any material is burned in the open or in a receptacle other than a furnace, incinerator, or other equipment connected to a stack or chimney.

___01Z "Orchard Heaters" shall mean any installation used or capable of being used for the purpose of giving protection from frost.

___01AA "Paper and Allied Products Industries" shall mean establishments engaged in manufacturing wood pulp from wood or other materials and the manufacture of paper, paperboard and building paper. Standard Industrial Classification, Major Group 26.

___01AB "Particulate Matter" shall mean any material, except water in uncombined form, that is or has been airborne, and exists as a liquid or a solid at standard condition.

___01AC "Person" shall mean any individual, group of individuals, firm, partnership, voluntary association, or private, public or municipal corporation, or political subdivision of the State, responsible for the use of property.

___01AD "Petroleum Refining and Related Industries" shall mean establishments engaged in petroleum refining, the manufacture of paving and roofing materials from petroleum products and compounding paving and building materials and petroleum products. Standard Industrial Classification, Major Group 29.

___01AE "Plan for Compliance" shall mean a schedule of actions submitted by the violator and approved by the Secretary, upon recommendation of the Department.

___01AF "Preparation" shall mean skinning, cutting, grinding, cooking, or drying, or any other operation necessary for the preparation of offal prior to the completion of sterilization.

___01AG "Primary Metals Industries" shall mean establishments engaged in the smelting, refining, sintering and alloying of ferrous and non-ferrous metals from ore, pig or scrap; and the manufacture of castings, forgings, powdered metals and other basic products of ferrous and non-ferrous metals, including the production of coke. Standard Industrial Classification, Major Group 33.

___01AH "Process Weight" shall mean the total weight of all materials introduced into any specific process which may cause emissions. Solid fuels charged will be considered as part of the process weight, but liquid and gaseous fuels and combustion air will not.

___01AI "Process Weight Per Hour" shall mean the rate established as follows:
For continuous or long-run steady-state operations, the total process weight for the entire period of continous operation or for a typical portion thereof, divided by the number of hours of such period or portion thereof.
For cyclical or batch operations, the total process weight for a period that covers a complete operation or an integral number of cycles, divided by the hours of actual process operation during such a period.
Where the nature of any process or operation or the design of any equipment is such as to permit more than one interpretation of this definition, the interpretation that results in the minimum value for allowable emission shall apply.

___01AJ "Public Collection of Refuse" shall mean the service provided by any governmental agency or commercial enterprise for the pick-up on a regularly scheduled basis of refuse from groups of individual homes, businesses, apartment buildings or other establishments.

___01AK "Reduction" shall mean any heated process, including rendering, cooking, drying, dehydrating, acidulating, digesting, evaporating and protein concentrating.

___01AL "Residual Fuel Oil" shall mean that fuel oil that meets the specifications of the American Society for Testing and Materials for Nos. 4, 5, or 6 (Bunker "C") oils or crude oils when used as a fuel.

___01AM "Ringelmann Smoke Chart" shall mean the chart published and described in the latest applicable U.S. Bureau of Mines Information Circular, used in estimating the light obscuring power of smoke. Any other method for grading smoke which is approved by the Department as the equivalent of the Ringelmann Smoke Chart may be substituted therefore.

___01AN "Secretary" shall mean the Secretary of the Department of Health and Mental Hygiene of the State of Maryland.

___01AO "Source" shall mean any property, real or personal, or person contributing to air pollution.

___01AP "Stack or Chimney" shall mean any flue, conduit or duct arranged to conduct emissions.

___01AQ "Standard Conditions" shall mean at a temperature of 70° Fahrenheit and a pressure of 29.92 inches of mercury.

___01AR "Violator" shall mean a person in violation of regulations or standards established herein.

(2.0) ___02 DELINEATION OF AREAS

Area I shall mean the Western Maryland Area of the State comprising the Counties of Allegany, Garrett and Washington.
Area II shall mean the Central Maryland Area of the State comprised of Frederick County.
Area III shall mean the Baltimore Metropolitan Area of the State comprising Baltimore City, and the Counties of Anne Arundel, Baltimore, Carroll, Harford and Howard.
Area IV shall mean the Washington Metropolitan Area of the State comprising the Counties of Montgomery and Prince George's.
Area V shall mean the Southern Maryland Area of the State comprising the Counties of Calvert, Charles and St. Mary's.
Area VI shall mean the Eastern Shore Area of the State comprising the Counties of Caroline, Cecil, Dorchester, Kent, Queen Anne's, Somerset, Talbot, Wicomico and Worcester.

(8.0) ___03 AIR POLLUTION EPISODE SYSTEM

___03A General Requirements

1. An Air Pollution Episode System is to establish standards and procedures to be followed whenever pollution of the air has the potential of reaching an emergency condition if allowed to go unchecked.

2. Whenever the Secretary or the Governor determines the accumulation of air pollution may attain, is attaining or has attained a level or levels considered injurious to human health, conditions of air pollution designated as Forecast, Alert, Warning and Emergency shall be declared. In making a determination, the Secretary or the Governor shall be guided by the criteria defined in subsection ___03H.

3. To assure compliance with this regulation, sources designated by the Secretary shall submit standby emission reduction plans in accordance with subsection ___03C. In accordance with such standby emission reduction plans, standby orders as specified in subsection ___03D shall be implemented as a designated level is reached.

4. Nothing contained in this regulation shall be construed as allowing, permitting or maintaining an emission from any installation in the State of Maryland to be subject to a lesser degree of control as may be required for existing or new regulations adopted by the Secretary.

5. During air pollution episodes, sources having an interstate air pollution potential shall be governed by the following:

   a. Air pollution emissions within the jurisdiction of the State of Maryland must be controlled to the extent that neighboring state requirements shall not be compromised.

   b. Provisions of this subsection shall apply to installations within the State when a receptor state demonstrates, to the satisfaction of the Secretary, that a source or sources within the State of Maryland is substantially affecting established emergency episode criteria in the receptor state.

___03B Air Pollution Episode Criteria

1. A condition justifying the proclamation of a Forecast, Alert Warning or Emergency shall be deemed to exist whenever the Secretary or the Governor determines that the accumulation of the State may attain, is attaining or has attained levels which could, if such levels are sustained or exceeded, lead to a threat to the health of the public. In making this determination, the Secretary shall be guided by the specified conditions in subsections ___03B2, ___03B3, and ___03B4.

2. Episode Criteria

   a. Forecast Stage

   An internal administrative watch shall be declared by the

Department during the Forecast Stage whenever the Federal or Department meteorologist issues a forecast indicating an atmospheric stagnation will cover any substantial portion of the State of Maryland for twelve hours or more. Such a weather forecast will indicate meteorological conditions which are expected to inhibit pollutant dispersion. The internal watch shall be in effect for those areas covered by the weather forecast and it shall continue throughout the atmospheric stagnation will take the form of:

(1) A high air stagnation advisory including any substantial part of the State of Maryland issued by the Federal Government.

(2) A forecast by the Department meteorologist indicating localized meteorological conditions which will inhibit dispersion for an extended period of time.

b. Alert Stage

An Alert shall be declared by the Secretary of Health and Mental Hygiene or his designee when any one or more of the following pollutant levels is attained concurrent with:

(1) A judgement by the Department that the pollutant level is representative of air quality in a significant portion of the region. The Department shall consult the air pollution control agencies of the affected jurisdictions to help evaluate local situations.

(2) Meteorological conditions are such that pollutant dispersion is expected to be inhibited for twelve or more hours.

	Pollutant	Level
(a)	Sulfur Dioxide	0.3 ppm 24 hr. average
(b)	Particulate Matter	3.0 COH's 24 hr. average
(c)	Sulfur Dioxide & Particulate Matter	Combined product of 24 hr. SO_2 and COH's equal to 0.2
(d)	Carbon Monoxide	15 ppm 8 hr. average
(e)	Photochemical Oxidant	0.1 ppm 1 hour average
(f)	Nitrogen Dioxide	0.6 ppm 1 hour average or 0.15 ppm 24 hour average

c. Warning Stage

A Warning shall be declared by the Secretary of Health and

Mental Hygiene or his designee when any one or more of the following pollutant levels is attained concurrent with:

(1) A judgement by the Department that the pollutant level is representative of air quality in a significant portion of the region. The Department shall consult the air pollution control agencies of the affected jurisdictions to help evaluate local situations.

(2) Meteorological conditions are such that pollutant dispersion is expected to be inhibited for twelve or more hours.

	Pollutant	Level
(a)	Sulfur Dioxide	0.6 ppm 24 hr. average
(b)	Particulate Matter	5.0 COH's 24 hour average
(c)	Sulfur Dioxide & Particulate Matter	Combined product of 24 hr. SO_2 and COH's equal to 0.8
(d)	Carbon Monoxide	30 ppm 8 hr. average
(e)	Photochemical Oxidant	0.4 ppm 1 hr. average
(f)	Nitrogen Oxide	1.2 ppm 1 hour average or 0.3 24 hour average

d. Emergency Stage

An Emergency shall be declared by the Governor of the State of Maryland when any one or more of the following pollutant levels is attained concurrent with:

(1) A judgement by the Department that the pollutant level is representative of air quality in a significant portion of the regions. The Department shall consult the air pollution control agencies of the affected jurisdiction to help evaluate local situations.

(2) Meteorological conditions are such that this condition can be expected to continue for twelve or more hours.

	Pollutant	Level
(a)	Sulfur Dioxide	0.8 ppm 24 hr. average
(b)	Particulate Matter	7.0 COH's 24 hr. average
(c)	Sulfur Dioxide & Particulate Matter	Combined product of 24 hr. SO_2 and COH's equal to 1.2

(d)	Carbon Monoxide	40 ppm 8 hr. average
(e)	Photochemical Oxidant	0.6 ppm 1 hr. avg.
(f)	Nitrogen Dioxide	1.6 ppm 1 hr. avg. or 0.4 ppm 24 hr. avg.

e. Termination

Termination of all stages of the Air Pollution Episode System shall be called by the Secretary of Health and Mental Hygiene or his designee or the Governor of the State of Maryland based on:

(1) Consultation with the Federal or Department meteorologist which indicates that the atmospheric conditions justify termination and

(2) Appropriate reduction in pollutant levels below the Alert Stage criteria.

3. An episode condition has been reached if ambient air quality is measured to be in excess of the designated levels at any monitoring site in the State of Maryland, except when elevated pollution levels exist in an area that may be reduced by controlling emissions from one or a few individual sources contributing to the condition. Such a localized condition shall be known as an incident, and, the involved individual sources shall be subject to the same provisions as listed for the abatement of episodes.

4. The Alert, Warning, and Emergency stages may be activated on the basis of deteriorating air quality alone; i.e., an atmospheric stagnation forecast need not be in effect. (Subject to the conditions specified in subsections ___03B2b; ___03B2c; and ___03B2d.)

___03C Standby Emissions Reduction Plans

1. Any person responsible for the operation of an installation specifically identified in Table I or II or III of this section shall, when requested by the Department in writing, prepare standby emission reduction plans, consistent with good industrial practice and safe operating procedures, for reducing emissions creating air pollution during periods of Alert, Warning and Emergency. Standby emission reduction plans shall be designed to reduce or eliminate emissions in accordance with the objectives set forth in Tables I, II, and III as applicable.

2. Any person responsible for the operation of a source of emissions not specifically identified under subsection ____ 03C1 shall, when requested by the Department in writing, prepare standby emission reduction plans, consistent with good industrial practice and safe operating procedures, for reducing emissions creating air pollution during periods of Alert, Warning and Emergency. Standby emission reduction plans shall be designed to reduce or eliminate emissions in accordance with the objectives set forth in Tables I, II and III as applicable.

3. Standby emission reduction plans as required in subsections __03C1 and ___03C2 shall be in writing and show the source of emissions, the approximate amount of reduction of emissions to be achieved, the time necessary to achieve the reduction after being notified to implement the plan, and a description of the manner in which the reduction will be achieved during an Alert, Warning and Emergency period in accordance with the objectives set forth in Table I, II and III. Such plans shall be submitted in the form specified by the Department.

4. During a condition of Alert, Warning or Emergency, standby emission reduction plans as required by this section shall be made immediately available on the premises to any person authorized to enforce regulations promulgated under terms of the Air Quality Control Act.

5. Standby emission reduction plans as required by this section shall be submitted to the Department upon request within 30 days of the receipt of such request; such standby emission reduction plans shall be subject to review and approval by the Secretary. If, in the opinion of the Department, such standby emission reduction plans do not carry out the objectives set forth in Tables I, II and III, the Department may disapprove of said standby emission reduction plans, state its reason for disapproval and recommend specific amendments to the proposed standby emission reduction plans. The revised plan shall be re-submitted within a time period specified by the Department. Any person aggrieved **by** an order requiring the preparation of a revised plan shall be entitled to a hearing, upon written request filed within 10 days after the receipt of the order. Where such a hearing is requested by the aggrieved it shall be held pursuant to Article 43, Section 698. If any person fails to submit a standby emission reduction plan within the time period specified, or which in the opinion of the Department does not carry out the objectives set forth in Tables I, II and III, the Department shall promulgate such standby emission reduction as will meet the objectives stated in Tables I, II and III herein. Such plan shall thereafter be the standby emission reduction plan which the person responsible shall put into effect upon the declaration by the Secretary or the Governor of an air pollution Alert, Warning or Emergency.

___03D Control Requirements and Standby Orders

The following are standby orders which are hereby established according to the specific action stages of the Air Pollution Episode System which may be deemed appropriate for use by the Secretary or the Governor upon the declaration that specified stage has been reached. When announced by the Secretary or the Governor, through public communications media or otherwise that the specified stage of the Air Pollution Episode System exists, the following respective actions shall be taken when requested in the geographical areas included in the episode announcement.

1. Forecast Stage

    a. Specified open burning and all public insecticide and herbicide spraying shall cease, if so requested by the cognizant local governmental Control Officer in public announcements or otherwise.

2. Alert Stage

    a. No open burning or public pesticide or herbicide spraying shall be carried on.

    b. All on-site incineration of refuse shall be eliminated. Any person responsible for a source of air pollution as set forth in Table 1 in subsection ___03C shall take all Alert Stage actions as required for such source of air pollution; and shall particularly put into effect the standby emission reduction plan for an Alert Stage. Such persons shall prepare to put into effect the standby emission reduction plan for an air pollution Warning.

3. Warning Stage

    a. No open burning or public pesticide or herbicide spraying shall be carried on.

    b. All incineration of refuse shall be eliminated.

    c. Any person responsible for a source of air pollution as set forth in Table II in subsection ___03C shall take all Warning stage actions as required for such source of air pollution; and shall particularly put into effect the standby emission reduction plan for a Warning stage. Such persons shall prepare to put into effect the standby emission reduction plan for an air pollution Emergency.

4. Emergency Stage

    a. The Governor shall announce that an air pollution Emergency has been declared and specify appropriate action to be taken. Radio and television stations shall be requested to repeat the declaration at least once per hour.

b. No open burning or public pesticide or herbicide spraying shall be carried on.

c. All incineration of refuse shall be eliminated.

d. Any person responsible for the operation of a source of air pollution as set forth in Table III in subsection ___03C shall take all emergency stage actions as specified for such source of air pollution; and shall particularly put into effect the standby emission reduction plans for an air pollution Emergency stage.

e. All manufacturing establishments except those included in subsection ___03D4d shall institute such action as will eliminate or result in maximum reduction of emissions from their operations by ceasing, curtailing, or postponing operations which cause emissions, to the extent possible without causing injury to persons or damage to equipment.

f. All places of business and employment and education described below shall immediately cease operations, unless special permission is obtained from a police officer or a governmental public health agency.

    (1) Mining and quarrying of non-metalic materials.

    (2) All contract construction work except that which must proceed to avoid physical harm, hazardous conditions or excessive economic loss.

    (3) Wholesale trade establishments i.e., places of business primarily engaged in selling merchandise to retailers, to industrial, commercial, institutional or professional users, or to other wholesalers, or agents in buying merchandise for or selling merchandise to such persons or companies.

    (4) All offices of Federal, local, county, and State government, except to the extent that such offices must continue to operate in order to carry out the requirements of this plan, and those offices which provide essential services for maintenance of public health and safety.

    (5) All retail trade establishments except pharmacies and stores primarily engaged in the sale of foods.

    (6) Banks, credit agencies other than banks, securities and commodities brokers, dealers, exchanges and services, offices of insurance carriers, agents and brokers, real estate offices.

(7) Wholesale and retail laundries; laundry services and cleaning and drying establishments; photographic studios; beauty shops; barber shops and shoe repair shops.

(8) Advertising offices, consumers credit reporting, adjustment and collection agencies, duplication, addressing, blueprinting; photocopying, mailing list, and stenographic services; equipment rental services; garages.

(10) All wholesale and retail handling of gasoline.

(11) Establishments rendering amusement and recreation services including motion picture theaters.

(12) Elementary and secondary schools, colleges, universities, professional schools, junior colleges, vocational schools, public and private libraries.

(13) Others deemed necessary to protect the public health and welfare and as announced by the Governor.

g. All aircraft will be grounded with the exception of emergency flights.

h. No person shall use a motor vehicle, with the exception of emergency and governmental vehicles. Persons will be allowed to return to their residences from work or location other than their residences and to make other trips essential to protect health and safety.

i. Regulate and halt rail, bus and ship travel and all other forms of transportation where possible and allowing appropriate times for curtailing or ceasing operations.

j. Stop sources of pollution involved in military training, smoke school training, fire department training, rocket fuel testing, etc.

k. Every person shall do such acts or refrain from such acts as shall be specified in the Governor's declaration that an air pollution Emergency exists and as shall be specified in other announcements made or authorized by the Governor.

(3.0) ___04 PRIOR REGISTRATION OF PROPOSED INSTALLATIONS

___04A Requirements for Registration. No person shall make any installation except as provided in subsection 05E without first registering with the Department. Request for registration shall be made in writing, in triplicate, upon forms furnished by the Department and shall be accompanied by documents, drawings or other information specified by the Department, and when required by the Department, shall bear the seal and signature of a Registered Professional Engineer. Completion of application for a permit to construct under section ___11 may be considered to fulfill requirements of this section.

___04B Essential Information for Registration. Any information relating to secret processes or methods of manufacture or production disclosed to or required, ascertained or discovered by any employee or agent of the Department shall be kept confidential. Information to be given in the application shall include, but not be limited to, the following:

1. Description of the proposed installation.
2. Design capacity of the process equipment including process weight and process weight per hour.
3. Expected physical and chemical composition of the emissions; and pertinent design criteria such as discharge rate, concentration, volume and temperature.
4. Type and general characteristics of the control equipment.
5. Description and evaluation of location of the discharge point and other factors relating to dispersion and diffusion in the atmosphere.
6. Information on the relation of the discharge point to nearby structures and topography necessary to appraise the possible effects of the emissions.

___04C Action on Request for Registration. The Department shall acknowledge the receipt of the request for registration within one week. Within 60 days following the receipt of this request, the Department shall either register the proposed installation or notify the person that additional information is required. Registration does not imply approval by the Department of the installation.

(3.0) ___05 REGISTRATION OF EXISTING INSTALLATIONS

___05A Requirement for Registration. Persons responsible for installations except as provided in subsection ___05E shall apply for registration with the Department in a manner and form as required by the Department.

___05B Requirement for Registration. Persons responsible for installations except as provided in subsection ___05E shall apply for registration with the Department in a manner and form as required by the Department. Registration does not imply approval bytne Departmentof Installation.

___05C Change of Ownership. A change of ownership shall terminate the registration of the installation. The new owner shall apply for registration with the Department within 30 days of the change of ownership.

___05D Acknowledgement. The Department shall acknowledge receipt of the request for registration within one week.

___05E Installations Not Required to be Registered.

1. Existing installation for which a permit to operate are obtained under provisions of subsection ___11B and ___11H will not be required to apply for registration.

2. The Department shall provide a list specifying the types of installations that are not required to be registered under the provision of subsections ___04A and ___05A. The Department shall from time to time, as experience and conditions change, add to or delete from this list. Such list shall be made available with the forms furnished by the Department for "Prior Registration of Proposed Installations". The provision for not registering as herein provided shall not in any manner be construed as authorizing or permitting the creation of or maintenance of air pollution.

(9.0) ___06 TESTING AND MONITORING

___06A Requirements for Testing. The Department may require any person to conduct or have conducted testing to determine compliance with these regulations. The Department may at its option witness or conduct such tests. Such testing will be done at a reasonable time, and all information gathered during a testing operation will be provided to both parties.

1. Testing to determine the quantity of emissions shall be undertaken by generally recognized methods of measurement, and at such a point or points as to represent the actual discharge into the atmosphere; except that these may be modified or adjusted by the Control Officer to suit specific sampling conditions or needs based upon good practice, judgement and experience.

2. When the Department conducts or has such tests conducted, the person shall provide such sampling facilities, exclusive of instruments and sensing devices, as may be necessary to determine the quantity of emissions.

3. Any registrable installation contructed after the effective date of these amendments shall be provided with appropriate openings in the exhaust gas ductwork or in the stack or chimney to enable the collection of samples of the effluent to the atmosphere from such installation.

___06B Requirements for Monitoring. The Department or Control Officer may require a person responsible for any installation to install, use and maintain monitoring equipment or employ other methods as specified by the Department or the Control Officer to determine the quantity and/or quality of emissions discharged into the atmosphere and to maintain records and make reports on said emissions to the Department or the Control Officer in a manner and on a schedule approved by the Department or the Controll Officer.

1. The Department or the Control Officer shall, at reasonable times, have access to and be permitted to copy any records, inspect any monitoring equipment or methods required under this subsection.

2. Except when otherwise specified by the Department or the Control Officer, records required under this subsection shall be retained by the person responsible for the installation and shall be available for inspection by the Department and the Control Officer for

a period of not less than 90 days.

3. All records and reports submitted to the Department or the Control Officer required under this subsection shall be available for public inspection.

(7.0) ___07 MALFUNCTION OF AN INSTALLATION

___07A Requirement for Notification. When a malfunction in any installation occurs that can be expected to increase the emissions, and to continue for a period greater than 4 hours, the person shall notify the Control Officer or the Department by telephone. On receipt of this notification, the Control Officer may permit the continuance of the operation for a period not to exceed 10 days provided that written application is made to the Control Officer. Such application shall be made within 24 hours of the malfunction or within such other time period as the Control Officer may specify. In cases of major equipment failure, additional time period may be granted by the Control Officer provided a corrective program has been submitted by the person and approved by the Control Officer.

(6.0) ___08 PENALTIES AND PLAN FOR COMPLIANCE

___08A Civil Penalty. Any person who violates the provisions of any standard or rule or regulations of the Air Quality Control Act shall be liable to a civil penalty of not more than $10,000. Each day during which a violation continues shall be a separate violation.

___08B Plan for Compliance. A violator who has submitted a plan for compliance with these regulations and has had that plan or amendments to it approved by the Secretary, upon recommendation of the Department, shall not be considered to be in violation of these regulations as long as he acts in accordance with the original or amended plan.

(12.0) ___09 MOTOR VEHICLE EMISSIONS

___09A Removal of Control Devices. No person shall remove, alter or otherwise render inoperative, exhaust emission control, crank case ventilation or any other air pollution control device which has been installed as a requirement of Federal law or regulation.

___09B Operation of Motor Vehicles. No person shall operate a motor vehicle originally equipped with air pollution control devices as required by Federal law or regulation unless such devices are in place and in operating condition.

___09C Exceptions. The requirements of Subsections ___09A and ___09B shall not apply to an alteration or modification to use a fuel other than gasoline where it has been shown that the emissions from such modified or altered vehicle are at levels which comply with existing state or Federal standards for emissions from motor vehicles.

(13.0) ___10 RECORDS AND INFORMATION

___10A General. For the purpose of developing or assisting in the development of any implementation plan, standard of performance, emission standard or the enforcement of any regulation contained herein, the Department shall, at reasonable times, have access to and be permitted to copy any records of any fuel supplier in order to determine to whom fuel is distributed or sold, in what quantity and what type. All information obtained under this section shall be entitled to protection as trade secrets and the Department shall keep such information confidential.

(3.0) ___11 PERMITS

___11A Permit to Construct. No person shall cause, suffer, allow or permit the construction, modification or alteration of any installation except as provided for in subsection ___11G without first having obtained a "Permit to Construct" from the Department. A "Permit to Construct" shall be void if the construction, modification or alteration is not begun within one year from the date of issuance or if the work involved in construction, modification or alteration is suspended for one year or more from the date of issuance.

___11B Permit to Operate. A person shall not cause, or permit any installation specified in subsection ___11H to be used or operated without first having obtained a "Permit to Operate" from the Department. Such permits shall be valid for a period of one year and may be renewed only after application in writing to the Department, upon request of the Department, not less than 90 days prior to their expiration date.

___11C Conditional Permit. Upon receipt of an application for the issuance of a "Permit to Construct" or a "Permit to Operate" or any renewal thereof, the Department may issue a temporary "Conditional Permit" valid for a period not to exceed 90 days. The holder of a "Conditional Permit" shall comply with the conditions contained in same as well as all other provisions of these regulations and Federal air pollution control regulations.

___11D Permits Do Not Cancel Need for Other Permits. Permits to construct and permits to operate issued under this section are based on the control of air pollution only, and do not in any way obviate the applicant's obligation to obtain necessary permits from other government agencies.

___11E Saving Clause. The possession of a "Permit to Operate" does not relieve any person from the obligation to comply with all other provisions of these regulations and Federal air pollution control regulations.

___11F Exemptions. The provisions of subsections ___11A and ___11B shall not apply to structural changes, repairs or maintenance of any article, machine, equipment or contrivance if such changes, or repairs of maintenance cannot change the quality, nature or quantity of emissions.

___11G Installations Not Required to Obtain Permits to Construct. The following types of installations are not required to obtain a "Permit to Construct" from the Department.

1. Maintenance, replacement, structural changes or minor repair which does not change capacity of such process equipment, fuel-burning equipment, control equipment, or incinerators and which does not involve any change in the quality, nature, or quantity of emissions therefrom.
2. Motor vehicles, steamships, tugs, and railroad locomotives.
3. Fuel burning equipment using gaseous fuels or No. 1 or No.2 fuel oil with a heat input less than 1,000,000 BTU per hour.
4. Fuel burning equipment using solid fuel with a heat input of less than 350,000 BTU per hour.
5. Stationary internal combustion engines with less than 1000 brake horsepower.
6. Bench scale laboratory equipment used exclusively for chemical or physical analysis or experimentation.
7. Portable brazing, soldering, or welding equipment.
8. The following equipment:
    - (a) Comfort air conditioning or comfort ventilating systems which are not designed to remove emissions generated by or released from specific units of equipment.
    - (b) Water cooling towers and water cooling ponds unless used for evaporative cooling of process water, or for evaporative cooling of water from barometric jets or barometric condensors or used in conjunction with an installation requiring a permit to operate.
    - (c) Equipment used exclusively for steam cleaning.
    - (d) Grain, metal, plastic or mineral extrusion presses.
    - (e) Porcelain enameling furnaces or porcelain enameling drying ovens.
    - (f) Unheated solvent dispensing containers or unheated solvent rinsing containers of 60 gallons capacity or less.
    - (g) Equipment used for hydraulic or hydrostatic testing.
9. The following equipment or any exhaust system or collector serving exclusively such equipment:
    - (a) Blast cleaning equipment using a suspension of abrasive in water.

(b) Bakery ovens where the products are edible and intended for human consumption.

(c) Kilns for firing ceramic ware, heated exclusively by gaseous fuels, singly or in combinations and electricity.

(d) Confection cookers where the products are edible and intended for human consumption.

(e) Drop hammers or hydraulic presses for forging or metal working.

(f) Die casting machines.

(g) Photographic process equipment which an image is reproduced upon material through the use of sensitized radiant energy.

(h) Equipment for drilling, carving, cutting, routing, turning, sawing, planing, spindle sanding or disc sanding of wood or wood products.

(i) Equipment for surface preparation of metals by use of aqueous solutions, except for acid solutions.

(j) Equipment for washing or drying products fabricated from metal or glass, provided that no volatile organic materials are used in the process and that no oil or solid fuel is burned.

(k) Laundry dryers, extractors or tumblers for fabrics cleaned with only water solutions of bleach or detergents.

(l) Containers, reservoirs, or tanks used exclusively for electrolytic plating with, or electrolytic polishing of, or electrolytic stripping of the following metals: Brass, Bronze, Cadmium, Copper, Iron, Lead, Nickel, Tin, Zinc, Precious Metals.

10. Natural draft hoods or natural draft ventilators.

11. Containers, reservoirs or tanks used exclusively for:

(a) Dipping operations for coating objects with oils, waxes, or greases, where no organic solvents are used.

(b) Dipping operations for applying coatings of natural or synthetic resins which contain no organic solvents.

(c) Storage of butane, propane or liquified petroleum or natural gas.

(d) Storage of lubricating oils.

(e) Unheated storage of organic materials with an initial boiling point of 300° F or greater.

(f) Storage of Nos. 1, 2, 4, 5 and 6 fuel oil and aviation jet engine fuel.

(g) Storage of motor vehicle gasoline and having an individual tank capacity of 25,000 gallons or less.

(h) The storage of organic liquids normally used as solvents, diluents, or thinners, inks, colorants, paints, lacquers, enamels, varnishes, liquid resins or other surface coatings and having a capacity of 2000 gallons or less.

12. Gaseous fuel-fired or electrically-heated furnaces for heat treating glass or metals, the use of which does not involve molten materials.

13. Crucible furnaces, pot furnaces or induction furnaces, with a capacity of 1,000 pounds or less each, in which no sweating or distilling is conducted, nor any fluxing conducted utilizing chloride, fluoride, or ammonium compounds, and from which only the following metals are poured or in which only the following metals are held in a molten state:

(a) Aluminum or any alloy containing over 50 percent aluminum, provided that no gaseous chlorine compounds, chlorine, aluminum chloride or aluminum fluoride are used.

(b) Magnesium or any alloy containing over 50 percent magnesium.

(c) Lead or any alloy containing over 50 percent lead.

(d) Tin or any alloy containing over 50 percent tin.

(e) Zinc or any alloy containing over 50 percent zinc.

(f) Copper.

(g) Precious Metals.

14. Vacuum cleaning systems used exclusively for industrial, commercial or residential housekeeping purposes.

___11H Installations Required to Obtain a Permit to Operate. As prescribed in ___11B, the following installations and pieces of equipment are required to obtain a "Permit to Operate" from the Department, unless specifically exempted by the Department on the basis of capacity or nature of equipment or materials or amount of emission or other indication of limited potential for causing air pollution.

1. Incinerators of 2000#/hr. or more rated capacity.

2. Fuel burning installations using liquid or solid fuels with a capacity

of 50 x 10^6 BTU/hr. or more maximum rated heat input, when located on a premise where the total rated heat input for all fuel burning installations of 100 x 10^6 BTU/hr. or more.

3. Metal reclamation furnaces - all types, all sizes.

4. Glass melting furnaces of 1 ton/hour or more or 1 ton/batch or more capacity.

5. Sintering machines - metallic ores and mineral products, of 1 ton/hour or more capacity.

6. Lime kilns - all types, of 1 ton/hour or more capacity.

7. Cement kilns - all types, of 1 ton/hour or more capacity.

8. Other kilns of 5 ton/hour or more capacity.

9. Coke ovens - all types of 1 ton/day or more capacity.

10. Rendering cookers - all types of 500 lb. or more capacity.

11. Digesters - all types of 500 lb. or more capacity.

12. Sulfuric acid plants - all types, all sizes.

13. Chemical reactors of 1 ton or more capacity or 1 ton/hour or more throughput.

14. Varnish or resin cookers - all types of 500#/hr. or more capacity or 500#/hr. or more throughput.

15. Distilling tanks or towers of 1000 gal./hour or more capacity.

16. Through-circulation dryers - mineral products or metallic ores, of 5 ton/hour or more capacity.

17. Spray dryers of 1 ton or more capacity or 1 ton or more per hour throughput.

18. Crushers, hammermills, shredders, grinders of 5 ton/hour or more capacity.

19. Ball mills and roller mills - dry type of 2 ton/hour or more capacity.

20. Scarfing machines - metal products only, all sizes.

21. Motor gasoline storage tanks without floating roofs and with a capacity of 40,000 gal. or more.

22. Solvent storage tanks without floating roofs and with a capacity of 10,000 gal. or more on premises where the total amount of solvents stored exceeds 25,000 gallons.

23. Gasoline tank truck loading racks outloading 20,000 gal/day or more.

24. Metallurgical furnaces involving molten metal holding 1 ton or more of metal or having a throughput greater than 500 pounds per hour.

25. By-product recovery furnaces - 1 ton or more capacity or 1 ton/hour or more throughput.

26. Any installation with a potential hydrocarbon solvent emission of 1 ton/day or more.

27. Any other source discharging more than 500#/day of any emission to the atmosphere, upon request of the Department.

___11I Applications for Permits.

1. Permit to Construct. Applications for a permit to construct shall be made to the Department on forms provided by the Department. The Department shall require such information and details regarding the installation as it considers necessary to determine whether the installation is designed to operate in compliance with these regulations and Federal air pollution control regulations and that the installation incorporates advances in the technology of air pollution control developed for the kind and amount of emissions by the applicant's installation. Such information and details shall include but not be limited to the same essential information as required for registration in subsection ___04B.

2. Permit to Operate. For the kinds of installations specified in subsection ___11H, applications for a permit to operate and renewals of operating permits shall be made to the Department, on forms provided by the Department. The Department shall require such information and details regarding the installation as it considers necessary to determine whether the installation is designed to operate in compliance with these regulations and Federal air pollution control regulations and that the installation incorporates advances in the technology of air pollution control developed for the kind and amount of emissions by the applicant's installation.

___11J Action on Application for Permit. The Department shall acknowledge the receipt of an application for a permit to construct or operate within one week. Within 60 days following the receipt of this application, the Department shall either issue or deny a permit, or within 30 days notify the applicant that additional information is required. Issuance of a permit does not imply approval by any other governmental agency.

___11K Denial of Application. Whenever it shall appear to the Department that the operation or construction of an installation for which a permit is sought will result in emissions in violation of any of these regulations or contravention of applicable ambient air quality standards, an order shall be entered denying the permit and setting forth the reasons thereof.

The Department shall not accept a further application unless the applicant has complied with the objections specified by the Department as its reason for denial of the permit.

___11L Notification of Denial; Hearings. An order denying a permit or the granting of a conditional permit shall be served as summonses are served or by certified mail upon the applicant and shall be final unless the applicant requests a hearing before the Department within 10 days after service. Where such a hearing is requested by the applicant, it shall be held pursuant to Article 43, Section 698.

___11M Transfers. A permit shall not be transferable either from one premise to another, from one installation to another, or from one person to another.

___11N Permits to be Available. Any person in possession of a "Permit to Operate" shall maintain said permit on the premises for which the permit has been issued, and shall make said permit immediately available to the Department upon request.

___11O Revocation of a Permit. The Department shall issue an order suspending or revoking any permit for violation of any of these regulations or any Federal air pollution control regulations. An order suspending or revoking a permit shall be served as summonses are served or by certified mail upon the permit holder and shall be final unless the holder requests a hearing before the Department within 10 days after service. Where such a hearing is requested by the holder, it shall be held pursuant to Article 43, Section 698.

TABLE 1

EMISSION REDUCTION OBJECTIVES FOR THE ALERT STAGE

Source of Emissions	Alert Stage Actions
1. Coal or oil-fired electric power generating facilities.	a. Substantial reduction of emissions by utilizing fuels having low ash and sulfur content.(Use gaseous fuels where possible) b. Substantial reduction of emissions by diverting loads to electric power generating facilities outside of Alert area.
2. Coal or oil-fired steam producing facilities having a capacity to burn in excess of four tons of coal per hour or 600 gallons of fuel oil per hour.	a. Substantial reduction of emissions by utilization of fuels having low ash and sulfur content. (Use gaseous fuels where possible.) b. Substantial reduction of steam load demands consistent with continuing plant operations.
3. Manufacturing industries of the following classification which employ more than 20 employees at any one location: Standard Industrial Classification Major Groups 26 Paper and Allied Products Industry 28 Chemical and Allied Products Industry 29 Petroleum Refining and Related Industry 32 Glass, Clay and Concrete Products Industry 33 Primary Metal	a. Substantial reduction of emissions from manufacturing operations by curtailing, postponing or deferring production and allied operations. b. Substantial reduction of emissions by deferring by-product or trade waste disposal which emit air pollution. c. Substantial reduction of heat load demands.
4. On-Site Incineration.	a. Stop completely.

Continued on next page

5. Any source of air pollutants, not covered above, upon written request of the Department may be required to submit standby plans describing emission cutbacks to be taken in the event an Alert is called.	a. Substantial reduction possible consistent with requirements for safety of people and preservation of property.

Actions specified are primarily for control of particulate matter and/or oxides of sulfur emissions, and will be instituted when the alert stage is called for these pollutants. Alert stage called for other pollutants may not require instituting these actions if no reduction in pollutant level will be attained.

TABLE II

EMISSION REDUCTION OBJECTIVES FOR
THE WARNING STAGE

Source of Emissions	Warning Stage Emissions
1. Coal or oil-fired electric power generating facilities.	a. Maximum reduction of emissions to provide essential power needs by utilization of fuels having lowest ash and sulfur content. (Use gaseous fuels where possible.) b. Maximum reduction of emissions by diverting electric power generation to facilities outside of Warning Area.
2. Coal or oil-fired steam producing facilities having a capacity to burn in excess of four tons of coal per hour or 600 gallons of fuel oil per hour.	a. Maximum reduction of emissions by utilization of fuels having the lowest available ash and sulfur content. (Use gaseous fuels where possible.) b. Maximum reduction of heat and steam demands to absolute necessities consistent with preventing equipment damage. c. Make ready for emergency action if Emergency stage declared.
3. Manufacturing industries of the following classification which employ more than 20 employees at any one location: Standard Industrial Classification, Major Groups 26 Paper and Allied Products 28 Chemical and Allied Prods. & Ind. 29 Petroleum Refining and Related Industries 32 Glass, Clay & Concrete Prods. 33 Primary Metal Industries	a. Maximum reduction of emissions from manufacturing operations by ceasing, curtailing, postponing or deferring production and allied operations to the extent possible without causing injury to persons or damage to equipment. b. Maximum reduction of emissions by deferring by-product or trade waste disposal processes which emit air pollution. c. Maximum reduction of heat load demands.

4. Refuse Incinerators.	a. Complete elimination of the use of all incinerators.
5. Any source of air pollutants, not covered above, upon written request of the Department may be required to submit standby plans describing emission cut-backs to be taken in the event a Warning is declared.	a. Maximum reduction possible consistent with requirements for safety of people and preservation of property.

Actions specified are primarily for control of particulate matter and/or oxides of sulfur emissions, and will be instituted when the warning stage is called for these pollutants. Warning stage called for other pollutants may not require instituting all these actions if no reduction in pollutant level will be attained.

TABLE III

EMISSION REDUCTION OBJECTIVES FOR THE EMERGENCY STAGE

Source of Emissions	Emergency Stage Actions
1. Coal or oil-fired electric power generating facilities.	a. Maximum reduction of emissions to provide essential power needs by utilization of fuels having lowest ash and sulfur content. (Use gaseous fuels where possible) b. Maximum reduction of emissions by diverting electric power generation to facilities outside of Emergency area.
2. Coal or oil-fired steam producing facilities having a capacity to burn in excess of four tons of coal per hour or 600 gallons of fuel oil per hour.	a. Maximum reduction of heat and steam demands to absolute necessities consistent with preventing equipment damage. b. Taking the action called for in the Emergency portion of the Standby Emission Reduction Plan.
3. Manufacturing industries of the following classification which employ more than 20 employees at any one location: Standard Industrial Classification, Major Groups 26 Paper and Allied Products 28 Chemical and Allied Products Industries 29 Petroleum Refining and Related Industries 32 Glass and Clay and Concrete Products 33 Primary Metal Industries	a. Elimination of emissions from manufacturing operations by ceasing, curtailing, postponing, or deferring production and allied operations to the extent possible without causing injury to persons or damage to equipment. b. Elimination of emissions from by-product or trade waste disposal processes which emit air pollution. c. Maximum reduction of heat load demands.

4. Refuse Incinerators.	a. Complete elimination of the use of all incinerators.
5. All standby emission reduction plans, required by the Department and not already in effect or described above, shall be implemented.	

Actions specified are primarily for control of particulate matter and/or oxides of sulfur emissions and will be instituted when the emergency stage is called for these pollutants. Emergency stage called for other pollutants may not require instituting all these actions if no reduction in pollutant level will be attained.

Maryland State Department of Health and Mental Hygiene
301 West Preston Street
Baltimore, Maryland 21201

(As Amended through March 13, 1972)

10.03.36 Regulations Governing the Control of Air Pollution in Area I*

Pursuant to the authority conferred upon the Secretary of Health and Mental Hygiene by Article 43, Annotated Code of Maryland, 1957 Edition, and Supplement, the following regulations governing the control of air pollution in Area I are hereby established as requirements of the Department of Health and Mental Hygiene.

(51.13) ___01 CONTROL AND PROHIBITION OF OPEN FIRES

___01A General. No person shall cause, suffer, allow or permit an open fire except as provided in subsection ___01B, ___01C and ___01D.

___01B Control Officer May Authorize Certain Open Fires.

1. Subject to review by the Department, the Control Officer may, upon receipt of an application made on forms provided by the Department or local fire control agency, issue or approve a permit in writing allowing an open fire provided all of the following conditions are met:

   a. The Control Officer is satisfied that there is no practical alternate method to dispose of the material to be burned or to conduct the desired activities.

   b. No hazardous condition or air pollution or nuisance will be created.

   c. Fire control laws or regulations of other governmental agencies will not be violated.

   d. No materials which produce dense smoke when burned, including but not limited to tires and roofing material, will be burned.

   e. The material to be burned shall have originated on the premises on which it is to be burned.

2. The Control Officer may impose other conditions to minimize creation of smoke, to prevent nuisances and air pollution, and to protect the health, safety, comfort and property of any persons.

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* Editor's note: Western Maryland comprised of Garrett, Allegany and Washington Counties

___01C Public Officer May Authorize Certain Fires.

Public officers, in the performance of their official duties, may set an open fire or give permission for an open fire, with concurrence of the Control Officer, provided all reasonable means are employed to minimize smoke if the fire is necessary for one or more of the following reasons or purposes.

1. For the prevention of a fire hazard that cannot be abated by other means.

2. For the instruction of public fire fighters or industrial employees under supervision of the appropriate fire control official.

3. For the protection of public health or safety when other means for disposing of hazardous materials are not available.

___01D Allowed Open Fires.

Open fires otherwise in conformance with other governmental fire control ordinances, provided no nuisance or air pollution is created, are allowed without permission as follows:

1. In those areas where no provision is made for public collection of leaves, the open burning of leaves originating on the premises by householders is permitted. On and after July 1, 1973, no leaves shall be burned at locations closer than 200 feet from any neighboring habitable dwelling or place where people work or congregate.

2. In those areas where no provision is made for public collection of refuse, burning of ordinary household trash (I.I.A. Waste types 0 and 1 only) originating on the premises, excluding commercial establishments, by householders is permitted provided that:

   a. Materials are not burned which create dense smoke (emissions of an opacity or darkness greater than No. 2 on the Ringlemann Smoke Chart);

   b. On and after July 1, 1973, no refuse shall be burned at locations closer than 200 feet from any neighboring habitable dwelling or place where people work or congregate.

3. Cooking of Food.

4. Fires set in the course of agricultural operations in growing crops or raising fowl or animals or in accepted forestry practice. In no case shall this provision be construed as allowing the burning of ordinary household or barnyard trash in areas where provision is made for public collection of refuse.

5. Recreational purposes, such as campfires.

6. Oil or gas fired salamanders or similar devices designated specifically for space heating or warming of outdoor workers, etc., provided no visible emissions are created.

7. Warming fires for outdoor workers, providing smoke emissions are not darker than No. 2 on the Ringelmann Smoke Chart, and the fires are located no closer than 200 feet from any neighboring habitable building.

(50.1.2) ___02 CONTROL AND PROHIBITION OF VISIBLE EMISSIONS

___02A For the Purpose of these regulations:

1. "Existing installation" shall mean those erected prior to the effective date of these regulations. (Date will be noted by reference number for each specific regulation.)

2. "Modified installation" shall mean those altered, changed or added to on or after the effective date of these regulations. (Date will be noted by reference number for each specific regulation.)

3. "New plant" shall mean any installation for which the major proportion of the fuel burning, incineration, processing or manufacturing equipment in the installation is erected on or after the effective date of these regulations. (Date will be noted by reference number for each specific regulation.) This definition is not intended to apply to a "modified installation" where new control equipment is added to an existing installation. In questionable cases, the determination of new plant shall be made by the Department.

___02B Visible Emissions for New Plants.[1] No person shall cause, suffer, allow or permit the discharge of emissions from any new plant or building other than water in an uncombined form, which are visible to human observers.

___02C Visible Emissions from Existing and Modified Installations.[2]

1. Existing and Modified Bituminous Concrete Manufacturing Plants. No person shall cause, suffer, allow or permit the discharge of emissions from any existing or modified bituminous concrete manufacturing installation other than water in an uncombined form, which are visible to human observers.

2. Other Existing and Modified Installations. No person shall cause, suffer, allow or permit emissions from any other existing installation, modified installation or building that are darker in shade or appearance than that designated as No. 1 on the Ringelmann Smoke Chart; or of such opacity as to obscure an observer's view to a degree greater than does smoke designated as No. 1 on the Ringelmann Smoke Chart.

___02D Exceptions.

1. Subsections ___02B and ___02C shall not apply to emissions during the building of a new fire, cleaning of fires, soot blowing, start-up and process modification or adjustment, or occasional cleaning of control equipment, the shade or appearance of which is not darker than No. 2 on the Ringelmann Smoke Chart for a period or periods aggregating no more than 4 minutes in any sixty minutes.

2. Any person who believes that meeting the requirements of subsection ___02B is not practical in a particular instance may request an exception to the requirements of subsection ___02B. Such a request shall be submitted to the Department in writing and include evidence to show why compliance is not practical. Based on evidence presented and other information, the Department may recommend to the Secretary that an exception be granted for a period not exceeding one year at a time under such stated terms and conditions as the Secretary may determine, provided the appellant has shown that:

   a. There presently are no practical ways or means available to enable compliance with subsection ___02B and;

   b. When possible, he is participating vigorously and substantially in activities directed toward finding or developing ways and means which would make it practical to reduce or eliminate visible emissions from the kind of plant which is at issue.

3. Subsection ___02B shall not apply to emissions of the following:

   a. From the burning of wood in fireplaces on premises used for residential or recreational purposes;

   b. From open fires (except salamanders) permitted under provisions of subsections ___01B, ___01C and ___01D of this regulation.

4. The Control Officer may grant exceptions to ___02C above under the following conditions:

   a. When the application of ___02C to a residential building housing two or less families creates undue economic hardship on individuals residing therein or,

   b. When the installation's primary way of transferring heat is by the radiant method rather than a piped fluid system such as forced hot air, hydronic, or steam. Installations in this category would include stoves, room heaters, floor or wall mounted circulating heaters, fireplaces or similar devices.

(50.1) ___03 CONTROL AND PROHIBITION OF PARTICULATE MATTER EMISSIONS

(50.1) ___03A General Conditions. All calculations of particulate matter emissions shall be made in terms of grains per standard cubic foot dry exhaust gas (gr/SCFD).

1. For fuel burning plants and installations calculations shall be corrected to 50% excess air.

2. For incineration plants and installations calculations shall be corrected to 12% carbon dioxide and as if no auxiliary fuel has been used, except for pathological waste units which shall be corrected to 3.5% carbon dioxide.

(51.5) ___03B Control of Particulate Matter from Fuel Burning Plants and Installations.

1. General Conditions for Fuel Burning Plants and Installations.

    a. When two or more fuel burning plants or installations are connected to a single stack, the combined heat input of all units connected to the stack shall be used to determine the allowable emissions from the stack.

    b. When a single fuel burning plant or installation is connected to two or more stacks, the allowable emissions from all the stacks combined shall not exceed that allowable for the same unit if connected to a single stack.

2. New Fuel Burning Plants.[3]

    a. No person shall cause, suffer, allow or permit particulate matter caused by the combustion of fuel in any new fuel burning plant to be discharged into the atmosphere in excess of the amounts shown in Table 1.

    b. Dust Collection Devices Required on New Fuel Burning Plants.

        (1) Effective October 1, 1972, no person shall cause, suffer, allow or permit the combustion of residual fuel oil in any new fuel burning plant with a fuel burning capacity of less than 200×10^6 BTU per hour unless such plant is equipped with a dust collector, the collection efficiency of which meets the requirements shown in Table 1.

        (2) Effective immediately, no person shall cause, suffer, allow or permit the combustion of solid fuel in any new fuel burning plant unless such plant is equipped with a dust collector with 99% or more efficiency or the combustion of fuel oil in an oil burning installation with a heat input greater than 200×10^6 BTU/hour, unless equipped with a dust collector with an efficiency of 80% or more.

3. Existing and Modified Fuel Burning Installations[4]. No person shall cause, suffer, allow or permit particulate matter caused by the combustion of fuel in any existing or modified fuel burning installation to be discharged from any stack or chimney into the atmosphere in excess of the hourly rate set forth in the following table.

Heat Input in Million BTU per hour	Maximum Allowable Discharge of Particulate Matter in Pounds per million BTU from Existing and Modified Fuel Burning Installations
Up to and including 10	0.60
>10 to 100	0.35
>100 to 1000	0.20
Greater than 1000	0.12

For a heat input between any two consecutive heat inputs stated in the preceding table, maximum allowable discharge of particulate matter is shown for existing and modified fuel burning installations on Figure 1. For the purposes hereof, heat input shall be calculated as the aggregate heat content of all fuels whose products of combustion pass through the stack or chimney.

4. Exceptions. The Control Officer may grant exceptions to ___03B3 above under the following conditions:

   a. When the application of subsection ___03B3 to a residential building housing two or less families creates undue economic hardship on individuals residing therein or,

   b. When the installation's primary way of transferring heat is by the radiant method rather than a piped fluid system such as forced hot air, hydronic, or steam. Plants in this category would include stoves, room heaters, floor or wall mounted circulating heaters, fireplaces or similar devices.

(51.9) ___03C Particulate Matter from Incineration Plants and Installations.

1. New Incineration Plants.[5]

   a. No person shall cause, suffer, allow or permit to be discharged into the atmosphere particulate matter to exceed 0.10 gr/SCFD from any new incineration plant that has a burning capacity less than 1 ton of refuse per hour and is used to burn less than 5 tons of refuse per day.

   b. No person shall cause, suffer, allow or permit to be discharged into the atmosphere particulate matter to exceed 0.03 gr/SCFD from any new incineration plant that has a burning capacity equal to or greater than 1 ton of refuse per hour or is used to burn 5 tons or more of refuse per day.

2. Existing and Modified Incineration Installations[6]. No person shall cause, suffer, allow or permit to be discharged into the outdoor atmosphere from any existing or modified incinerator the following:

   a. From any existing or modified incinerator burning less than 200 pounds of refuse per hour, particulate matter to exceed 0.3 grain per standard cubic foot of dry flue gas.

   b. From any existing or modified incinerator burning 200 or more pounds of refuse per hour, particulate matter to exceed 0.2 grain per standard cubic foot of dry flue gas.

(51.1) ___03D Particulate Matter from Agricultural Operations.

1. Particulate Matter from Grain Drying Installations.

   a. No person shall cause, suffer, allow or permit the operation of any grain drying installation unless equipped in such a manner that all exhaust gases discharged pass through a 50 mesh screen; or the installation is equipped with other equipment or incorporated design features that will accomplish the same or more effective results in reducing the discharge of particulate matter.

   b. Exceptions. Mobile type grain drying installations, with an operating capacity of 500 bushels per hour or less, located outside a town, village or city and at a distance greater than 300 yards from a habitable dwelling or place of business, shall be exempt from ___03D1a provided no nuisance or air pollution is created.

   c. Mesh Sizing refers to the Tyler Standard Screen Scale.

2. Control of Orchard Heaters.

General. No person shall cause, suffer, allow or permit to be used any type of orchard heater or other such frost control device which discharges into the atmosphere more than one gram per minute of unconsumed carbonaceous matter.

(50.1.1) ___03E Particulate Matter from Other Plants and Installations.[7]

1. Other New Plant.

   a. No person shall cause, suffer, allow or permit to be discharged into the outdoor atmosphere from any other new process plant, particulate matter in excess of 0.03 gr/SCFD.

b. The maximum allowable weight of particulate matter discharged per hour from any other new process plant shall not exceed that determined from Table 2. Where the process weight per hour falls between two values in the table, the maximum weight discharged per hour shall be determined by linear interpolation. When the process weight exceeds 60,000 pounds per hour, the maximum allowable weight discharged per hour will be determined by the use of the following equation:

$E = 55.0\ P^{0.11} - 40$
E = Maximum weight discharged per hour (lbs.)
P = Process weight rate in tons per hour

This limitation shall supersede the requirements of section ___03E1a if it requires a lower emission rate per hour.

2. Other Existing and Modified Process Installations.[8]

a. Existing and Modified Bituminous Concrete Manufacturing Installations. No person shall cause, suffer, allow or permit to be discharged into the atmosphere from any existing or modified bituminous concrete manufacturing installation particulate matter in excess of 0.03 gr/SCFD.

b. Other Existing and Modified Installations.

(1) The maximum allowable weight of particulate matter discharged per hour from any other existing or modified process installation shall not exceed that determined from Table 2. Where the process weight per hour falls between two values in the table, the maximum weight discharged per hour shall be determined by linear interpolation. When the process weight exceeds 60,000 pounds per hour, the maximum allowable weight discharged per hour will be determined by use of the following equation:

$E = 55.0\ P^{0.11} - 40$
Where E = Maximum weight discharged per hour (lbs.)
P = Process weight rate in tons per hour

(2) For those processes in which the process weight per hour exceeds 60,000 pounds, the maximum allowable weight of particulate matter discharged per hour may exceed that calculated by the above equation providing that the concentration of particulate matter in the gases discharged to the atmosphere is less than 0.05 gr/SCFD.

(51.3) ___03F Particulate Matter from Materials Handling and Construction and Other Acts.

1. No person shall cause, suffer, allow or permit any material to be

handled, transported or stored; or a building, its appurtenances, or a road to be used, constructed, altered, repaired or demolished without taking reasonable precautions to prevent particulate matter from becoming airborne. Such reasonable precautions shall include, when appropriate as determined by the Control Officer, but not be limited to the following:

a. Use of water or chemicals for control of dust in the demolition of existing buildings or structures, construction operations, the grading of roads or the clearing of land;

b. Application of asphalt, oil, water or suitable chemicals on dirt roads, materials stockpiles, and other surfaces which can create airborne dusts;

c. Installation and use of hoods, fans and dust collectors to enclose and vent the handling of dusty materials. Adequate containment methods shall be employed during sandblasting of buildings or other similar operations;

d. Covering, at all times when in motion, open-bodied vehicles transporting materials likely to create air pollution. Alternate means may be employed to achieve the same results as would covering;

e. The paving of roadways and their maintenance in a clean condition;

f. The prompt removal from paved streets of earth or other material which has been transported thereto by trucks or earth moving equipment or erosion by water.

2. No person shall cause, suffer, allow or permit visible emissions beyond the lot line of the property on which the emissions originate.

___04 CONTROL AND PROHIBITION OF GAS, VAPOR AND ODOR EMISSIONS

(2.0) ___04A General.

1. Odors. No person shall cause, suffer, allow or permit the discharge into the atmosphere of gases, vapors, or odors beyond the property line in such a manner that a nuisance or air pollution is created.

2. General Conditions. All calculations of emissions governed by ___04C shall be adjusted to standard conditions.

(51.6) ___04B Sulfur Oxides from the Burning of Fuel. No person shall burn, sell or make available for sale any fuel unless the following conditions are met:

1. On and after July 1, 1970, all solid fuels burned on a premise where the sum total maximum rated heat input of all fuel burning equipment located on the premises is 100 million BTU per hour or greater, shall contain 1% or less sulfur by weight.

2. On and after July 1, 1970, all residual fuel oil shall contain 1% or less sulfur by weight.

3. Distillate fuel oils, 0.3 percent.

4. Process gas used as a fuel, 0.3 percent.

(50.2) ___04C Sulfur Compounds from Other than Fuel Burning Installations.

1. No person shall cause, suffer, allow or permit the discharge into the atmosphere from installations other than fuel burning installations, of gases containing more than 2,000 parts per million by volume of sulfur dioxide. Any such installation contructed after the effective date of these regulations (9) shall not discharge into the atmosphere gases containing more than 500 parts per million by volume of sulfur dioxide.

2. No person shall cause, suffer, allow or permit the discharge into the atmosphere from installations other than fuel burning installations, of gases containing sulfuric acid, sulfur trioxide, or any combination thereof, greater than 70 milligrams per cubic meter reported as sulfuric acid. Any such installation constructed on or after the effective date of these regulations (10) shall not discharge into the atmosphere gases containing sulfuric acid, sulfur trioxide, or any combination thereof, greater than 35 milligrams per cubic meter reported as sulfuric acid.

(2.0) ___04D Exceptions.

1. Fuels containing sulfur in excess of the amounts specified in ___04B may be burned, sold, or made available for sale provided control equipment to desulfurize stack gases has been installed or other methods or devices are employed by the user or purchaser such that the discharge of sulfur dioxide to the atmosphere does not exceed 0.5 pounds per million BTU of heat input to the associated installation in which such fuel is burned.

2. The Secretary may authorize the operation of a scavenger or recovery plant to reclaim sulfur compounds which would otherwise be discharged into the air provided the operation of such a scavenger or recovery plant would reduce total discharge of sulfur compounds at least 95% with said plant in operation compared to discharge when the aforementioned plant is not operating. Such authorization may result in discharge of sulfur compounds whose concentration exceed those permitted by subsections 1 and 2 of ___04C. This subsection shall not apply to sulfuric acid manufacturing operations.

(9.0) ___04E Request for Analysis. Any person offering to sell or deliver fuel or any person responsible for equipment in which fuel is burned shall, upon request, submit to the Department or the Control Officer such analyses of the fuel as may be required to determine compliance with this section.

(50.6) ___04F Control of Odors from the Reduction of Offal and Vegetable Oil.

1. No person shall cause, suffer, allow or permit the use of an installation primarily engaged in the reduction of offal or vegetable oil unless all gases, vapors and gas-entrained matter from said installation are:

    a. First cooled to a temperature of no greater than 160°F and then

    b. The non-condensible fraction is incinerated at a temperature of not less than 1400°F for a period of not less than 0.4 seconds.

    c. Alternate methods may be used if determined by the Department to be equally or more effective for the purpose of controlling air pollutions.

2. Any person processing or incinerating gases, vapors or gas-entrained matter as required by subsection ___04F1 shall install, operate, and maintain in good working order and calibration, continuous recording devices for indicating temperature, or pressure or other operating conditions. Such devices shall be approved by the Department and all data collected shall be made available to the Department or the Control Officer for inspection or copying upon request of the Department. Such data shall be kept on file by responsible persons for at least 60 days.

3. No person shall cause, suffer, allow or permit any offal or vegetable oil to be handled, transported or stored or to undertake the preparation of any offal or vegetable oil without taking reasonable precautions to prevent odors from being discharged. Such reasonable precautions, when approved by the Department, shall include but not be limited to the following:

    a. Storage of all offal or vegetable oil prior to or in the process of preparation in properly enclosed and vented equipment or areas, together with the use of effective devices and/or methods to prevent emission of odors or odor bearing gases.

    b. Use of covered vehicles of watertight construction for the handling and transporting of offal or vegetable oil.

    c. Use of hoods and fans to enclose and vent the storage, handling, preparation and conveying of any odorous materials together with effective devices and/or methods to prevent emissions of odors or odor bearing gases.

4. Whenever the emissions from an installation primarily engaged in the reduction of offal or vegetable oil create a nuisance or air pollution, beyond the property line, the Department may require that the building in which such installation is located be tightly closed and vented so that all emissions are treated by incineration or by other methods if determined by the Department to be equally or more effective for the purpose of controlling emissions.

5. The requirements of this subsection ___04F shall not apply to any installation engaged exclusively in the processing of food for human consumption.

(51.7) ___04G Nitrogen Oxides from New Fuel Burning Equipment.[11]

1. No person shall cause, suffer, allow or permit the discharge of nitrogen oxides into the atmosphere, from any new fuel burning equipment having a heat input rating of 250 million British Thermal Units (BTU) per hour, or more, in excess of the following rates:

   a. 0.20 pounds per million BTU heat input, maximum two hour average, expressed as NO_2 when gaseous fuel is burned.

   b. 0.30 pounds per million BTU heat input, maximum two hour average, expressed as NO_2 when liquid fuel is burned.

   c. 0.50 pounds per million BTU heat input, maximum two hour average, expressed as NO_2 when solid fuel is burned.

(51.10) ___04H Nitrogen Oxides from Nitric Acid Plants.

1. No person shall cause, suffer, allow or permit the discharge into the atmosphere from any existing nitric acid plant,(12) nitrogen oxides in excess of 5.5 pounds per ton of acid (100 percent basis) produced.

2. No person shall cause, suffer, allow or permit the discharge into the atmosphere from any new nitric acid plant,(13) nitrogen oxides in excess of 3.0 pounds per ton of acid (100 percent basis) produced.

(4.0) ___05 AMBIENT AIR QUALITY STANDARDS

___05A Definitions. For purposes of the ambient air quality standards in this section ___05 only, the following definitions shall apply.

1. Sulfur Oxides

Sulfur oxides include sulfur dioxide, sulfur trioxide, their acids, and the salts of their acids. For purposes of these ambient air quality standards, measurements of sulfur dioxide, by the method specified herein, shall be taken to indicate the concentration of sulfur oxides.

2. Particulate Matter

Particulate matter includes the substances collected from and/or settling out of the atmosphere by use of the measurement procedures prescribed herein for suspended particulate matter and dustfall, respectively.

3. Non-methane Hydrocarbons

Non-methane hydrocarbons are a class of organic compounds, excluding methane, whose molecules consist primarily of atoms of hydrogen and carbon and exist in the ambient air in the gaseous state. Specifically excluded are hydrocarbons and other organic compounds associated only with suspended particles in the atmosphere. For purpose of these air quality standards, non-methane hydrocarbons shall be taken to be the difference between the reported total hydrocarbons and methane values measured by the methods specified herein.

4. Photochemical Oxidants

The term photochemical oxidant is used to describe the oxidizing ability of the ambient air. Oxidants are produced in the ambient air as the result of complex photochemical reactions. Because these reactions depend on sunlight, only those oxidant concentrations occurring between 11 a.m. and 5 p.m. EST are considered to be of photochemical origin.

___05B Precepts.

1. It is known that concentrations of air pollutants above certain levels are harmful to the health of man. However, the threshold level at which adverse effects on man's health begin are not known with precision. It must be presumed that adverse effects over a long time period take place at concentrations lower than those now known to produce adverse effects over short time periods. Therefore, in establishing air quality standards, it is prudent to provide for margins of safety in reaching conclusions based on such data as are available which relate health effects to pollutant levels.

2. An ambient air quality standard which would result in avoidable degradation of air quality is in conflict with applicable State law.

3. The ambient air quality standards set forth herein, represent goals expressed in terms of limits on the duration and concentration of pollutants in the atmosphere which are not to be contra-

vened. The ambient air quality standards shall be achieved through application, under provisions or laws or regulations or otherwise, of ways and means for reducing pollutant concentrations including but not limited to removal of air pollutants from exhaust gas streams, fuel and process material changes, equipment changes, and land use management.

___05C Primary Ambient Air Quality Standards for All Substances Which May Cause Air Pollution and Control Measures To Be Required.

1. The primary ambient air quality standards for all substances which may cause air pollution shall be those lowest concentrations attainable by application of all reasonably available ways and means for reducing pollutant concentrations in the ambient air. In situations of time and place where the lower concentrations of any substance in the "more adverse range" as set forth herein are not exceeded, or when there is no standard for the "more adverse range", the "serious level" is not exceeded, all necessary ways and means shall be required for minimizing increases in concentrations of such substances in the ambient air, to the end that said concentrations shall not be exceeded in the future.

2. No statement, numerical standard, or time limit, contained elsewhere in ambient air quality standards shall be interpreted as mitigating in any way the necessity for and the reasonableness of applying all reasonably available ways and means for reducing pollutant concentrations in the ambient air.

___05D Secondary Ambient Air Quality Standards

1. General

   Secondary ambient air quality standards are presented in two categories: the more adverse range and the serious level. The concentrations denoting each category for various pollutants are presented in Table 3.

2. Air Pollution Control Measures To Be Required in the More Adverse Range.

   When ambient air concentrations of any pollutant listed in Table 3 are in the more adverse range, as set forth in Table 3, the application of all necessary ways and means for reducing such concentrations shall be required and the time schedule for their implementation shall be based on the premise that the pollutant concentrations are progressively to be reduced to the lower levels or less as set forth in Table 3, within the shortest reasonable time. Such reasonable time should not exceed seven years or such shorter time as may be specified under provisions of the Federal

Clean Air Act.

3. Air Pollution Control Measures To be Required at the Serious Level.

   When ambient air concentrations of any pollutant listed in Table 3 exceed the serious level, as set forth in Table 3, the application of all necessary ways and means shall be required for reducing such concentrations. The ways and means required and the time schedule for their implementation shall be based on the premise that the pollutant concentrations are progressively to be reduced to levels lower than the serious level concentrations set forth in Table 3 in the shortest possible time. If ambient air concentrations exceed the serious levels specified in Table 3 as of the year 1971, such concentrations should be reduced to less than the serious levels by not later than the end of calendar year 1974. If, in the future, ambient air concentrations first exceed serious level, such shortest time should not exceed three years from the year in which the serious level is first exceeded, or such shorter time, if any, as may be required under provisions of Federal law or regulations. In determining the ways and means to be required for reducing pollutant concentrations, matters of economics and private interests and other factors shall be subordinate considerations to the necessity of achieving the standards, for protection of the public health. Additionally, if standards have been adopted for the more adverse range, measures for reducing concentrations of the pollutant further below the serious level shall be instituted in accordance with provisions of paragraph ___05D2.

4. Measurement of Ambient Air Quality to Compare to the Standards.

   a. The method of measurement for each pollutant listed shall be the method specified in the Federal Register, Vol. 36, No. 84, Part III, April 30, 1971. Other methods may be used if they have been demonstrated to be equally or more specific, accurate, sensitive, and reproducible methods. Other less specific methods of measurement may be used provided a relationship is developed between results obtained by such method and the method specified and provided that the results are interpreted in terms of equivalence to those that would be expected using the listed methods, or other equally or more specific, accurate, sensitive, reproducible methods. Results shall be expressed as micrograms or milligrams of the pollutant per cubic meter of air, at 25 degrees Centigrade and 760 millimeters of mercury pressure except as specifically noted in Table 3. Such values may be converted to parts per million by volume (ppm) by utilizing the appropriate conversion factor listed in Table 3.

b. Number and Duration of Measurements

(1) General. The measurements to be taken to compare to the standards shall be made at the frequency and for the duration as noted in the following appropriate sub-paragraphs.

(2) Annual arithmetic averages shall be based on results from at least 52 sampling periods representing 24 hour periods, distributed throughout the year so as to adequately reflect the true annual average. The second highest daily average value so obtained shall be used to relate to the standards expressed as maximum exceeded once per year.

(3) Daily averages shall be based on measurements made during more than 50 percent of the time period represented. Daily averages may also be determined on the basis of a compilation of hourly averages determined as described in (6) below.

(4) Eight-hour averages shall be based upon measurements representing at least 55 percent of the designated eight-hour time periods. Eight-hour averages may also be determined on the basis of a compilation of eight hourly averages during designated time periods as described in (6) below.

(5) Three-hour averages shall be based upon measurements representing at least 55 percent of the period. Three-hour averages may also be made on the basis of a compilation of three individual hourly averages determined as described in (6) below.

(6) Hourly averages shall be based on at least seven momentary indications of the actual concentration during the hour or any more nearly complete representation of actual concentrations.

(7) Five-minute averages shall be based on samples representative of the total period. However, after a relationship has been developed between the maximum five-minute average and any other available averaging time, the relationship may be used to calculate maximum five-minute average values from such other averaging time data.

c. Location of Measurements

Measurements of air pollutants may be made at any place where air pollution could exist.

___05E Secondary Ambient Air Quality Standards for Fluorides.

1. Ambient air quality standards for fluorides at the more adverse and serious levels shall be those concentrations in the ambient air which result in the following values being exceeded:

   a. Vegetable Crops:

      Vegetable tissue intended for human use, trimmed as normally marketed or consumed shall not exceed 20 micrograms F per gram dry tissue in unwashed samples.

   b. Field Crops:

      (1) Middle aged fully expanded leaves of corn of sorghum intended for grain shall not, at time of tasseling, exceed 35 micrograms F per gram dry tissue in washed samples.

      (2) Any field crops intended for market as hay, silage or forage shall not exceed 40 micrograms F per gram dry tissue in unwashed samples as marketed.

      (3) Other field crops at any stage of growth shall not exceed 50 micrograms F per gram dry tissue in washed samples.

   c. Cattle Forage:

      (1) Running averages of 12 monthly samples of forage or hay or silage grown in the area as feed shall not exceed 40 micrograms F per gram in unwashed samples.

      (2) The average of any two consecutive months samples of forage or hay or silage grown in the area as feed shall not exceed 60 micrograms F per gram dry tissue in unwashed samples.

      (3) No monthly sample of forage or hay or silage grown in the area as feed shall exceed 80 micrograms F per gram dry tissue in unwashed samples.

   d. Fruit Trees, Berries and Other Commercial Crops

      Fully expanded functional leaves shall not exceed 50 micrograms F per gram dry tissue in washed samples.

   e. Deciduous Trees and Shrubs

      Fully expanded functional leaves shall not exceed 100 micrograms F per gram dry tissue in washed samples.

f. Conifers and Evergreen Trees or Shrubs

Fully expanded leaves or needles of the current year shall not exceed 50 micrograms F per gram dry tissue in washed samples. Leaves and needles of prior seasons shall not exceed 75 micrograms F per gram dry tissue in washed samples.

g. Grasses and Herbs

Grasses and herbs not subject to browsing, grazing or harvest for use in feeds or food shall not exceed 150 micrograms F per gram dry tissue in washed samples.

h. Ornamental Plantings

Ornamental plantings, except trees, shrubs and turf where ___05E1d, ___05E1e, ___05E1f, and ___05E1g apply, shall not exceed 40 micrograms F per gram dry tissue in fully expanded leaves, in washed samples, at any period during the growing season.

i. Other Values

When vegetation sampling is deemed by the Department to be not practicable, unsatisfactory conditions may be assumed to exist by the Department if either:

(1) Static limed filter paper samples of 28 to 32 day exposure exceed five micrograms F per 100 square centimeters per day, or

(2) Gaseous fluorides exceed two micrograms F per cubic meter of air in any 24 hour sample and any 72 hour average exceeds 0.4 micrograms F per cubic meter of air.

2. Air Pollution Control Measures To Be Required. When and where concentrations of fluoride cause any of the values set forth in ___05E1 to be exceeded, the application of all necessary ways and means shall be required for reducing such concentrations. The ways and means to be required and the time schedule for their implementation shall be based on the premise that fluoride concentrations are progressively to be reduced in the shortest possible time to levels that will not cause the values in subsection ___05E1 to be exceeded.

3. Measurement of Fluoride. Methods for measuring the fluoride content of any plant tissue shall be by suitable modification of the Willard and Winter method (ref. Willard, H. H. and Winter, O. B. Volumetric Method for Determination of Fluorine. Ind. Eng. Chem. Anal. Ed. 5:7-10, 1933) such as:

Weinstein, L. H., R. H. Mandl, D. C. McCune, J. S. Jacobson, and A. F. Hitchcock, Semi-Automated Analysis of Fluoride in Biological Materials. J. Air Poll. Control Assoc. 15:222-5, 1965.

Results are expressed on a dry weight basis in washed and unwashed samples as noted. Micrograms F per gram dry tissue means micrograms of fluoride as the ion, per gram of dry material.

Methods of measuring gaseous air samples shall be by the carbonate tube method or the dual tape method by Weinstein et al ref:

Weinstein, L. H. and R. H. Mandl. The Separation and Collection of Gaseous and Particulate Fluoride. VDI Berichte. 164, 1970.

Other methods may be used if they have been demonstrated to be equally or more specific, accurate, sensitive and reproducible and if first approved by the Department.

(2.0) ___06 CONTROL AND PROHIBITION OF INSTALLATIONS AND OPERATIONS

___06A General. No installation or premise shall be operated or maintained in such a manner that a nuisance or air pollution is created. Nothing in this regulation shall in any manner be construed as authorizing or permitting the creation of or maintenance of a nuisance or air pollution.

___06B Circumvention. No person shall install or use any article, machine, equipment or other contrivance, the use of which, without resulting in a reduction in the total weight of emissions, conceals or dilutes an emission which would otherwise constitute a violation of any applicable air pollution control regulation.

___06C Refuse Burning Prohibited in Certain Installations. No person shall burn refuse in any plant, installation or equipment not specifically designed, constructed or modified for that purpose.

___06D Prohibition of Certain New Fuel Burning Plants.[14]

1. No person shall construct a new fuel burning plant designed for use of residual fuel oil in which any individual furnace has a rated heat input of less than five million BTU per hour nor shall residual fuel oil be used at any time in any new fuel burning plant having a rated heat input of less than five million BTU per hour.

2. No person shall construct a new fuel burning plant designed for use of coal in which any individual furnace has a rated heat input of less than 250 million BTU per hour nor shall coal be used at any time in any new fuel burning plant having a rated heat input of less than 250 million BTU per hour.

___06E Control of Sources of Fluoride Emissions.

1. No person shall cause, suffer, allow or permit the discharge into the atmosphere of fluorides from any installation in such combinations and in such amounts that any provision of the ambient air quality standards for fluorides set forth in ___05E is contravened.

2. Surveillance

   a. Existing Installation Surveillance Program.

   A person responsible for an installation discharging fluorides shall conduct a continuing environmental surveillance program, in a manner approved by the Department, to determine whether ambient air quality standards for fluorides are violated.

   b. New Installation Surveillance Program.

   No "Permit to construct will be issued for any new potential source of fluoride emissions until the applicant has conducted a survey of background levels of fluoride in the environment in a manner and to an extent approved by the Department. Applicants for a "Permit to Operate" shall be subject to the requirements of ___06E2a.

   c. Reporting.

   All data collected by the environmental programs and surveys of fluorides, required by this subsection. shall be maintained and made available to the Department in a manner and on a schedule approved by the Department. Such data shall be available to the public.

   d. Modification of Surveillance Programs.

   Any modification to the environmental programs and surveys, required under this subsection, must be approved by the Department. Such modification may be initiated by the Department.

(2.0) ___07 TRANSITION FROM PREVIOUS REGULATIONS

___07A Previous Plans for Compliance. All plans for compliance with regulations 43P02 as it became effective on January 28, 1969, which have been approved by the Secretary shall be evaluated by the Department. Any part of such plans which the Department determines relate to an installation which is subject to more restrictive emission control requirements under terms of this amended regulation 10.03.36, as compared to the respective requirements of regulation 43P02 as it became effective on January 28, 1969, will be null and void. If a plan for compliance is declared null and void, an amended plan may be submitted to the Department.

___07B Previous Regulations Remain in Effect in Certain Cases. Provisions of regulation 43P02 as adopted on January 28, 1969 shall remain in effect with regard to installations, plants and matters dealt with in these amendments until the effective dates provided for by these amendments are applicable to the respective plants, installations or matters.

1 -- Plants Built On Or After January 17, 1972.
2 -- Installations Built January 17, 1972.
3 -- Plants Built On or After January 17, 1972.
4 -- Installations Built January 17, 1972.
5 -- Plants Built On or After January 17, 1972.
6 -- Installations Built January 17, 1972.
7 -- Plants Built On or After January 17, 1972.
8 -- Installations Built January 17, 1972.
9 -- January 17, 1972
10 -- January 17, 1972
11 -- Equipment Built On or After May 12, 1972.
12 -- Plants Built Before May 12, 1972.
13 -- Plants Built On or After May 12, 1972.
14 -- Plants Built On or After January 17, 1972.

MARYLAND STATE DEPARTMENT OF HEALTH AND MENTAL HYGIENE
301 West Preston Street
Baltimore, Maryland 21201

(As Amended through March 13, 1972)

10.03.37 Regulations Governing the Control of Air Pollution in Area II*

Pursuant to the authority conferred upon the Secretary of Health and Mental Hygiene by Article 43, Annotated Code of Maryland, 1957 Edition, and Supplement, the following regulations governing the control of air pollution in Area II are hereby established as requirements of the Department of Health and Mental Hygiene.

(51.13) ___01 CONTROL AND PROHIBITION OF OPEN FIRES

___01A General. No person shall cause, suffer, allow or permit an open fire except as provided in section ___01B, ___01C, and ___01D.

___01B Control Officer May Authorize Certain Open Fires.

1. Subject to review by the Department, the Control Officer may, upon receipt of an application made on forms provided by the Department or local fire control agency, issue or approve a permit in writing allowing an open fire provided all of the following conditions are met:
    a. The Control Officer is satisfied that there is no practical alternate method to dispose of the material to be burned or to conduct the desired activities.
    b. No hazardous condition or air pollution or nuisance will be created.
    c. Fire control laws or regulations of other governmental agencies will not be violated.
    d. No materials which produce dense smoke when burned, including but not limited to tires and roofing material, will be burned.
    e. The material to be burned shall have originated on the premises on which it is to be burned.
2. The Control Officer may impose other conditions to minimize creation of smoke, to prevent nuisances and air pollution, and to protect the health, safety, comfort and property of any persons.

___01C Public Officer May Authorize Certain Fires.

Public officers, in the performance of their official duties, may set an open fire or give permission for an open fire, with concurrence of the Control Officer, provided all reasonable means are employed to minimize smoke if the fire is necessary for one or more of the following reasons or purposes:

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*Editor's Note: Central Maryland Area Comprised of Frederick County.

1. For the prevention of a fire hazard that cannot be abated by other means.

2. For the instruction of public fire fighters or industrial employees under supervision of the appropriate fire control official.

3. For the protection of public health or safety when other means for disposing of hazardous materials are not available.

___01D Allowed Open Fires. Open fires otherwise in conformance with other govermental fire control ordinances, provided no nuisance or air pollution is created, are allowed without permission as follows:

1. In those areas where no provision is made for public collection of leaves, the open burning of leaves originating on the premises by householders is permitted. On and after July 1, 1973, no leaves shall be burned at locations closer than 200 feet from any neighboring habitable dwelling or place where people work or congregate.

2. In those areas where no provision is made for public collection of refuse, burning of ordinary household trash (I.I.A. Waste types 0 and 1 only) originating on the premises, excluding commercial establishments, by householders is permitted provided that:

    a. Materials are not burned which create dense smoke (emissions of an opacity or darkness greater than No. 2 on the Ringelmann Smoke Chart);

    b. On and after July 1, 1973, no refuse shall be burned at locations closer than 200 feet from any neighboring habitable dwelling or place where people work or congregate.

3. Cooking of Food.

4. Fires set in the course of agricultural operations in growing crops or raising fowl or animals or in accepted forestry practice. In no case shall this provision be construed as allowing the burning of ordinary household or barnyard trash in areas where provision is made for public collection of refuse.

5. Recreational purposes, such as campfires.

6. Oil or gas fired salamanders or similar devies designated spec-

ifically for space heating or warming of outdoor workers, etc., provided no visible emissions are created.

7. Warming fires for outdoor workers, providing smoke emissions are not darker than No. 2 on the Ringlemann Smoke Chart, and the fires are located no closer than 200 feet from any neighboring habitable building.

(50.1.2) ___02 CONTROL AND PROHIBITION OF VISIBLE EMISSIONS

___02A For the purpose of these regulations:

1. "Existing installation" shall mean those erected prior to the effective date of these regulations. (Date will be noted by reference number for each specific regulation.)

2. "Modified installation" shall mean those altered, changed or added to on or after the effective date of these regulations. (Date will be noted by reference number for each specific regulation.)

3. "New plant" shall mean any installation for which the major proportion of the fuel burning, incineration, processing of manufacturing equipment in the installation is erected on or after the effective date of these regulations. (Date will be noted by reference number for each specific regulation.) This definition is not intended to apply to a "modified installation" where new control equipment is added to an existing installation. In questionable cases, the determination of new plant shall be made by the Department.

___02B Visible Emissions from New Plants.[1] No person shall cause,suffer, allow or permit the discharge of emissions from any new plant or building other than water in an uncombined form, which are visible to human observers.

___02C Visible Emissions from Existing and Modified Installations.[2]

1. Existing and Modified Bituminous Concrete Manufacturing Plants. No person shall cause, suffer, allow or permit the discharge of emissions from any existing or modified bituminous concrete manufacturing installation other than water in an uncombined form, which are visible to human observers.

2. Other Existing and Modified Installations. No person shall cause, suffer, allow or permit emissions from any other existing installation, modified installation or building that are darker in shade or appearance than that designated as No. 1 on the Ringelmann Smoke Chart; or of such opacity as to obscure an observer's view to a degree greater than does smoke designated as No. 1 on the Ringelmann Smoke Chart.

___02D Exceptions.

1. Subsections ___02B and ___02C shall not apply to emissions during the building of a new fire, cleaning of fires, soot blowing, start-up and process modification or adjustment, or occasional cleaning of control equipment, the shade or appearance of which is not darker than No. 2 on the Ringelmann Smoke Chart for a period or periods aggregating no more than four minutes in any sixty minutes.

2. Any person who believes that meeting the requirements of subsection ___02B is not practical in a particular instance may request an exception to the requirements of subsection ___02B. Such a request shall be submitted to the Department in writing and include evidence to show why compliance is not practical. Based on evidence presented and other information, the Department may recommend to the Secretary that an exception be granted for a period not exceeding one year at a time under such stated terms and conditions as the Secretary may determine, provided the appellant has shown that:

   a. There presently are no practical ways or means available to enable compliance with subsection ___02B and;

   b. When possible, he is participating vigorously and substantially in activities directed toward finding or developing ways and means which would make it practical to reduce or eliminate visible emissions from the kind of plant which is at issue.

3. Subsection ___02B shall not apply to emissions of the following:

   a. From the burning of wood in fireplaces on premises used for residential or recreational purposes;

   b. From open fires (except salamanders) permitted under provisions of subsections ___01B, ___01C and ___01D of this regulation.

4. The Control Officer may grant exceptions to ___02C above under the following conditions:

   a. When the application of ___02C to a residential building housing two or less families creates undue economic hardship on individuals residing therein, or

   b. When the installation's primary way of transferring heat is by the radiant method rather than a piped fluid system such as forced hot air, hydronic, or steam. Installations in this category would include stoves, room heaters, floor or wall mounted circulating heaters or similar devices.

(50.1) ___03 CONTROL AND PROHIBITION OF PARTICULATE MATTER EMISSIONS

(50.1) ___03A General Conditions. All calculations of particulate matter emissions shall be made in terms of grains per standard cubic foot dry exhaust gas (gr/SCFD).

1. For fuel burning plants and installations calculations shall be corrected to 50% excess air.

2. For incineration plants and installations calculations shall be corrected to 12% carbon dioxide and as if no auxiliary fuel has been used, except for pathological waste units which shall be corrected to 3.5% carbon dioxide.

(51.5) ___03B Control of Particulate Matter from Fuel Burning Plants and Installations.

1. General Conditions for Fuel Burning Plants and Installations.

   a. When two or more fuel burning plants or installations are connected to a single stack, the combined heat input of all units connected to the stack shall be used to determine the allowable emissions from all the stacks combined shall not exceed that allowable for the same unit if connected to a single stack.

   b. When a single fuel burning plant or installation is connected to two or more stacks, the allowable emissions from all the stacks combined shall not exceed that allowable for the same unit if connected to a single stack.

2. New Fuel Burning Plants.[3]

   a. No person shall cause, suffer, allow or permit particulate matter caused by the combustion of fuel in any new fuel burning plant to be discharged into the atmosphere in excess of the amounts shown in Table 1.

      (1) Effective October 1, 1972, no person shall cause, suffer, allow or permit the combustion of residual fuel oil in any new fuel burning plant with a fuel burning capacity of less than 200 x 10^6 BTU per hour unless such plant is equipped with a dust collector, the collection efficiency of which meets the requirements shown in Table 1.

      (2) Effective immediately, no person shall cause, suffer, allow or permit the combustion of solid fuel in any new fuel burning plant unless such plant is equipped with a dust collector with 99% or more efficiency or the combustion of fuel oil in an oil burning installation with a heat input greater than 200 x 10^6 BTU per hour, unless

equipped with a dust collector with an efficiency of 80% or more.

3. Existing and Modified Fuel Burning Installations.[4]

No person shall cause, suffer, allow or permit particulate matter caused by the combustion of fuel in any existing or modified fuel burning installation to be discharged from any stack or chimney into the atmosphere in excess of the hourly rate set forth in the following table.

Heat input in Million BTU per hour	Maximum Allowable Discharge of Particulate Matter in Pounds per million BTU from Existing and Modified Fuel Burning Installations
Up to and including 10	0.60
>10 to 100	0.35
>100 to 1000	0.20
Greater than 1000	0.12

For a heat input between any two consecutive heat inputs stated in the preceding table, maximum allowable discharge of particulate matter is shown for existing and modified fuel burning installations on Figure 1. For the purposes hereof, heat input shall be calculated as the aggregate heat content of all fuels whose products of combustion pass through the stack or chimney.

4. Exceptions. The Control Officer may grant exceptions to ___03B3 above under the following conditions:

   a. When the application of subsection ___03B3 to a residential building housing two or less families creates undue economic hardship on individuals residing therein,or

   b. When the installation's primary way of transferring heat is by the radiant method rather than a piped fluid system such as forced hot air, hydronic, or steam. Plants in this category would include stoves, room heaters, floor or wall mounted circulating heaters, fireplaces or similar devices.

(51.9) ___03C Particulate Matter from Incineration Plants and Installations.

1. New Incineration Plants.[5]

   a. No person shall cause, suffer, allow or permit to be discharged into the atmosphere particulate matter to exceed 0.10 gr/SCFD from any new incineration plant that has a burning capacity less than one ton of refuse per hour and is used to burn less than one ton of refuse per hour and is used to burn less than five tons of refuse per day.

b. No person shall cause, suffer, allow or permit to be discharged into the atmosphere particulate matter to exceed 0.03 gr/SCFD from any new incineration plant that has a burning capacity equal to or greater than one ton of refuse per hour or is used to burn five tons or more of refuse per day.

2. Existing and Modified Incineration Installations.[6] No person shall cause, suffer, allow or permit to be discharged into the outdoor atmosphere from any existing or modified incinerator the following:

a. From any existing or modified incinerator burning less than 200 pounds of refuse per hour, particulate matter to exceed 0.3 grain per standard cubic foot of dry flue gas.

b. From any existing or modified incinerator burning 200 or more pounds of refuse per hour, particulate matter exceed 0.2 grain per standard cubic foot of dry flue gas.

(51.1) ___03D Particulate Matter from Agricultural Operations.

1. Particulate Matter from Grain Drying Installations.

a. No person shall cause, suffer, allow or permit the operation of any grain drying installation unless equipped in such a manner that all exhaust gases discharged pass through a 50 mesh screen; or the installation is equipped with other equipment or incorporated design features that will accomplish the same or more effective results in reducing the discharge of particulate matter.

b. Exceptions. Mobile type grain drying installations, with an operating capacity of 500 bushels per hour or less, located outside a town, village or city and at a distance greater than 300 yards from a habitable dwelling or place of business, shall be exempt from ___03D1a provided no nuisance or air pollution is created.

c. Mesh Sizing refers to the Tyler Standard Screen Scale.

2. Control of Orchard Heaters.

General. No person shall cause, suffer, allow or permit to be used any type of orchard heater or other such frost control device which discharges into the atmosphere more than one gram per minute of unconsumed carbonaceous matter.

(50.1.1)___03E Particulate Matter from Other Plants and Installations.

1. Other New Plant.[7]

a. No person shall cause, suffer, allow or permit to be discharged into the outdoor atmosphere from any other new process plant, particulate matter in excess of 0.03 gr/SCFD.

b. The maximum allowable weight of particulate matter discharged per hour from any other new process plant shall not exceed that determined from Table 2. Where the process weight per hour falls between two values in the table, the maximum weight discharged per hour shall be determined by linear interpolation. When the process weight exceeds 60,000 pounds per hour, the maximum allowable weight discharged per hour will be determined by the use of the following equation:

$$E = 55.0\ P^{0.11} - 40$$

Where E = Maximum weight discharged per hour (lbs.)
P = Process weight rate in tons per hour

This limitation shall supersede the requirements of section ___030E1a if it requires a lower emission rate per hour.

2. Other Existing and Modified Process Installations.

a. Existing and Modified Bituminous Concrete Manufacturing Installations. No person shall cause, suffer, allow or permit to be discharged into the atmosphere from any existing or modified bituminous concrete manufacturing installation particulate matter in excess of 0.03 gr/SCFD.

b. Other Existing and Modified Installations.[3]

(1) The maximum allowable weight of particulate matter discharged per hour from any other existing or modified process installation shall not exceed that determined from Table 2. Where the process weight per hour falls between two values in the table, the maximum weight discharged per hour shall be determined by linear interpolation. When the process weight exceeds 60,000 pounds per hour, the maximum allowable weight discharged per hour will be determined by use of the following equation:

$$E = 55.0\ P^{0.11} - 40$$

Where E = Maximum weight discharged per hour (lbs.)
P = Process weight rate in tons per hour

(2) For those processes in which the process weight per hour exceeds 60,000 pounds, the maximum allowable weight of particulate matter discharged per hour may exceed that calculated by the above equation providing that the concentration of particulate matter in the gases discharged to the atmosphere is less than 0.05 gr/SCFD.

(51.3) ___03F Particulate Matter From Materials Handling and Construction and Other Acts.

1. No person shall cause, suffer, allow or permit any material to be handled, transported, or stored; or a building, its appurtenances, or a road to be used, constructed, altered, repaired or demolished without taking reasonable precautions to prevent particulate matter from becoming airborne. Such reasonable precautions shall include, when appropriate as determined by the Control Officer, but not be limited to the following:

    a. Use of water of chemicals for control of dust in the demolition of existing buildings or structures, construction operations, the grading of roads or the clearing of land;

    b. Application of asphalt, oil, water or suitable chemicals on dirt roads, materials stockpiles, and other surfaces which can create airborne dusts;

    c. Installation and use of hoods, fans and dust collectors to enclose and vent the handling of dusty materials. Adequate containment methods shall be employed during sandblasting of buildings or other similar operation;

    d. Covering, at all times when in motion, open-bodied vehicles transporting materials likely to create air pollution. Alternate means may be employed to achieve the same results as would covering;

    e. The paving of roadways and their maintenance in a clean condition;

    f. The prompt removal from paved streets of earth or other material which has been transported thereto by trucks or earth moving equipment or erosion by water.

2. No person shall cause, suffer, allow or permit visible emissions beyond the lot line of the property on which the emissions originate.

___04 CONTROL AND PROHIBITION OF GAS, VAPOR AND ODOR EMISSIONS

(2.0) ___04A General.

1. Odors. No person shall cause, suffer, allow or permit the discharge into the atmosphere of gases, vapors, or odors beyond the property line in such a manner that a nuisance or air pollution is created.

2. General Conditions. All calculations of emissions governed by ___04C shall be adjusted to standard conditions.

(51.6) ___04B Sulfur Oxides from the Burning of Fuel. No person shall burn, sell or make available for sale any fuel unless the following conditions are met:

(1) The combustion of all solid fuels on a premise where the sum total maximum rated heat input of all fuel burning equipment located on the premise is 100 million BTU per hour or greater shall not result in a total emission of oxides of sulfur in excess of 3.5 pounds per million BTU actual heat input per hour.

(2) On and after July 1, 1975, residual fuel oil, 2.0 percent.

(3) Distillate fuel oils, 0.3 percent.

(4) Process gas used as a fuel, 0.3 percent.

(50.2) ___04C Sulfur Compounds from Other than Fuel Burning Installations.

1. No person shall cause, suffer, allow or permit the discharge into the atmosphere from installations other than fuel burning installations, of gases containing more than 2,000 parts per million by volume of sulfur dioxide. Any such installation constructed after the effective date of these regulations (9) shall not discharge into the atmosphere gases containing more than 500 parts per million by volume of sulfur dioxide.

2. No person shall cause, suffer, allow or permit the discharge into the atmosphere from installations other than fuel burning installations, of gases containing sulfuric acid, sulfur trioxide, or any combination thereof, greater than 70 milligrams per cubic meter reported as sulfuric acid. Any such installation constructed after the effective date of these regulations (10) shall not discharge into the atmosphere gases continaing sulfuric acid, sulfur trioxide, or any combination thereof, greater than 35 milligrams per cubic meter reported as sulfuric acid.

(2.0) ___04D Exceptions.

1. Fuels containing sulfur in excess of the amounts specified in ___04B may be burned, sold, or made available for sale provided control equipment to desulfurize stack gases has been installed or other methods or devices are employed by the user or purchaser such that the discharge of sulfur dioxide to the atmosphere does not exceed 0.5 pounds per million BTU of heat input to the associated installation in which such fuel is burned.

2. The Secretary may authorize the operation of a scavenger or recovery plant to reclaim sulfur compounds which would otherwise be discharged into the air provided the operation of such a scavenger or recovery plant would reduce total discharge of sulfur compounds at least 95% with said plant in operation compared to discharge

when the aforementioned plant is not operating. Such authorization may result in discharge of sulfur compounds whose concentration exceed those permitted by subsections 1 and 2 of ___04C. This subsection shall not apply to sulfuric acid manufacturing operations.

(9.0) ___04E Request for Analysis. Any person offering to sell or deliver fuel or any person responsible for equipment in which fuel is burned shall, upon request, submit to the Department or the Control Officer such analyses of the fuel as may be required to determine compliance with this section.

(50.6) ___04F Control of Odors from the Reduction of Offal and Vegetable Oil.

1. No person shall cause, suffer, allow or permit the use of an installation primarily engaged in the reduction of offal or vegetable oil unless all gases, vapors and gas-entrained matter from said installation are:

    a. First cooled to a temperature of not greater than 160°F and then

    b. The non-condensible fraction is incinerated at a termperature of not less than 1400°F for a period of not less than 0.4 seconds.

    c. Alternate methods may be used if determined by the Department to be equally or more effective for the purpose of controlling air pollution,

2. Any person processing or incinerating gases, vapors or gas-entrained matter as required by subsection ___04F1 shall install, operate and maintain in good working order and calibration, continuous recording devices for indicating temperature or pressure or other operating conditions. Such devices shall be approved by the Department and all data collected shall be made available to the Department or the Control Officer for inspection or copying upon request of the Department. Such data shall be kept on file by responsible persons for at least 60 days.

3. No person shall cause, suffer, allow or permit any offal or vegetable oil to be handled, transported or stored or to undertake the preparation of any offal or vegetable oil without taking reasonable precautions to prevent odors from being discharged. Such reasonable precautions, when approved by the Department, shall include but not be limited to the following:

    a. Storage of all offal or vegetable oil prior to or in the process of preparation in properly enclosed and vented equipment or areas, together with the use of effective devices and/or methods to prevent the discharge of odors or odor bearing gases.

b. Use of covered vehicles of watertight construction for the handling and transporting of offal or vegetable oil.

c. Use of hoods and fans to enclose and vent the storage, handling, preparation and conveying of any odorous materials together with effective devices and/or methods to prevent emission of odors or odor bearing gases.

4. Whenever the emissions from an installation primarily engaged in the reduction of offal or vegetable oil create a nuisance or air pollution, beyond the property line, the Department may require that the building in which such installation is located be tightly closed and vented so that all emissions are treated by incineration or by other methods if determined by the Department to be equally or more effective for the purpose of controlling emissions.

5. The requirements of this subsection ___04F shall not apply to any installation engaged exclusively in the processing of food for human consumption.

(51.7) ___04G Nitrogen Oxides From New Fuel Burning Equipment.[11]

1. No person shall cause, suffer, allow or permit the discharge of nitrogen oxides into the atmosphere, from any new fuel burning equipment having a heat input rating of 250 million British Thermal Units (BTU) per hour, or more, in excess of the following rates:

   a. 0.20 pounds per million BTU heat input, maximum two hour average, expressed as NO_2 when gaseous fuel is burned.

   b. 0.30 pounds per million BTU heat input, maximum two hour average, expressed as NO_2 when liquid fuel is burned.

   c. 0.50 pounds per million BTU heat input, maximum two hour average, expressed as NO_2 when solid fuel is burned.

(51.10) ___04H Nitrogen Oxides from Nitric Acid Plants.

1. No person shall cause, suffer, allow or permit the discharge into the atmosphere from any existing nitric acid plant, (12) nitrogen oxides in excess of 5.5 pounds per ton of acid (100 percent basis) produced.

2. No person shall cause, suffer, allow or permit the discharge into the atmosphere from any new nitric acid plant, (13) nitrogen ox-

ides in excess of 3.0 pounds per ton of acid (100 percent basis) produced.

(4.0) ___05 AMBIENT AIR QUALITY STANDARDS

___05A Definitions. For purposes of the ambient air quality standards in this section ___05 only, the following definitions shall apply.

1. Sulfur Oxides

Sulfur oxides include sulfur dioxide, sulfur trioxide, their acids, and the salts of their acids. For purposes of these ambient air quality standards, measurements of sulfur dioxide, by the method specified herein, shall be taken to indicate the concentration of sulfur oxides.

2. Particulate Matter

Particulate matter includes the substances collected from and/or settling out of the atmosphere by use of the measurement procedures prescribed herein for suspended particulate matter and dustfall, respectively.

3. Non-methane Hydrocarbons

Non-methane hydrocarbons are a class of organic compounds, excluding methane, whose molecules consist primarily of atoms of hydrogen and carbon and exist in the ambient air in the gaseous state. Specifically excluded are hydrocarbons and other organic compounds associated only with suspended particles in the atmosphere. For purpose of these air quality standards, non-methane hydrocarbons shall be taken to be the difference between the reported total hydrocarbons and methane values measured by the methods specified herein.

4. Photochemical Oxidants

The term photochemical oxidant is used to describe the oxidizing ability of the ambient air. Oxidants are produced in the ambient air as the result of complex photochemical reactions. Because these reactions depend on sunlight, only those oxidant concentrations occurring between 11 a.m. and 5 p.m. EST are considered to be of photochemical origin.

___05B Precepts.

1. It is known that concentrations of air pollutants above certain levels are harmful to the health of man. However, the threshold level at which adverse effects on man's health begin are not known with precision. It must be presumed that adverse effects

over a long time period take place at concentrations lower than those now known to produce adverse effects over short-time periods. Therefore, in establishing air quality standards, it is prudent to provide for margins of safety in reaching conclusions based on such data as are available which relate health effects to pollutant levels.

2. An ambient air quality standard which would result in avoidable degradation of air quality is in conflict with applicable State law.

3. The ambient air quality standards set forth herein represent goals expressed in terms of limits on the duration and concentration of pollutants in the atmosphere which are not to be contravened. The ambient air quality standards shall be achieved through application, under provisions or laws or regulations or otherwise, of ways and means for reducing pollutant concentrations including but not limited to removal of air pollutants from exhaust gas streams, fuel and process material changes, equipment changes, and land use management.

___05C Primary Ambient Air Quality Standards for All Substances Which May Cause Air Pollution and Control Measures To Be Required.

1. The primary ambient air quality standards for all substances which may cause air pollution shall be those lowest concentrations attainable by application of all reasonably available ways and means for reducing pollutant concentrations in the ambient air. In situations of time and place wherein the lower concentrations of any substance in the "more adverse range" as set forth herein are not exceeded, or when there is no standard for the "more adverse range", the "serious level" is not exceeded, all necessary ways and means shall be required for minimizing increases in concentrations of such substances in the ambient air, to the end that said concentrations shall not be exceeded in the future.

2. No statement, numerical standard, or time limit, contained elsewhere in ambient air quality standards shall be interpreted as mitigating in any way the necessity for and the reasonableness of applying all reasonably available ways and means for reducing pollutant concentrations in the ambient air.

___05D Secondary Ambient Air Quality Standards

1. General.

Secondary ambient air quality standards are presented in two categories: the more adverse range and the serious level. The concentrations denoting each category for various pollutants are presented in Table 3.

2. Air Pollution Control Measures To Be Required in the More Adverse Range.

   When ambient air concentrations of any pollutant listed in Table 3 are in the more adverse range, as set forth in Table 3, the application of all necessary ways and means for reducing such concentrations shall be required and the time schedule for their implementation shall be based on the premise that the pollutant concentrations are progressively to be reduced to the lower levels or less as set forth in Table 3, within the shortest reasonable time. Such reasonable time should not exceed seven years or such shorter time as may be specified under provisions of the Federal Clean Air Act.

3. Air Pollution Control Measures To Be Required at the Serious Level.

   When ambient air concentrations of any pollutant listed in Table 3 exceed the serious level, as set forth in Table 3, the application of all necessary ways and means shall be required for reducing such concentrations. The ways and means required and the time schedule for their implementation shall be based on the premise that the pollutant concentrations are progressively to be reduced to levels lower than the serious level concentrations set forth in Table 3 in the shortest possible time. If ambient air concentrations exceed the serious levels specified in Table 3 as of the year 1971, such concentrations should be reduced to less than the serious levels by not later than the end of calendar year 1974. If, in the future, ambient air concentrations first exceed the serious level, such shortest time should not exceed three years from the year in which the serious level is first exceeded, or such shorter time, if any, as may be required under provisions of Federal law or regulations. In determining the ways and means to be required for reducing pollutant concentrations, matters of economics and private interests and other factors shall be subordinate considerations to the necessity of achieving the standards, for protection of the public health. Additionally, if standards have been adopted for the more adverse range, measures for reducing concentrations of the pollutant further below the serious level shall be instituted in accordance with provisions of paragraph ___05D2.

4. Measurement of Ambient Air Quality to Compare to the Standards.

   a. The method of measurement for each pollutant listed shall be the method specified in the Federal Register, Vol. 36, No. 84, Part III, April 30, 1971. Other methods may be used if they have been demonstrated to be equally or more specific, accurate, sensitive, and reproducible. Other less specific methods of measurement may be used provided a relationship is developed between results obtained by such method and the method specified and provided that the results are interpreted in terms of equivalence to those that would be expected using the listed methods, or other equally or more specific, accurate, sensitive, reproducible methods. Results shall be expressed as micrograms or milligrams of the pollutant per cubic meter of air, at 25 degrees Centigrade and 760 millimeters of mercury pressure except as specifically noted in Table 3. Such values may be converted to parts per million by volume (ppm) by utilizing the appropriate conversion factor listed in Table 3.

b. Number and Duration of Measurements

(1) General. The measurements to be taken to compare to the standards shall be made at the frequency and for the duration as noted in the following appropriate sub-paragraphs.

(2) Annual arithmetic averages shall be based on results from at least 52 sampling periods representing 24 hour periods, distributed throughout the year so as to adequately reflect the true annual average. The second highest daily average value so obtained shall be used to relate to the standards expressed as maximum exceeded once per year.

(3) Daily averages shall be based on measurements made during more than 50 percent of the time period represented. Daily averages may also be determined on the basis of a compilation of hourly averages determined as described in (6) below.

(4) Eight-hour averages shall be based upon measurements representing at least 55 percent of the designated eight-hour time periods. Eight-hour averages may also be determined on the basis of a compilation of eight hourly averages during designated time periods as described in (6) below.

(5) Three-hour averages shall be based upon measurements representing at least 55 percent of the period. Three-hour averages may also be made on the basis of a compilation of three individual hourly averages determined as described in (6) below.

(6) Hourly averages shall be based on at least seven momentary indications of the actual concentration during the hour or any more nearly complete representation of actual concentrations.

(7) Five-minute averages shall be based on samples representative of the total period. However, after a relationship has been developed between the maximum five-minute average and any other available averaging time, the relationship may be used to calculate maximum five-minute average values from such other averaging time data.

c. Location of Measurements

Measurements of air pollutants may be made at any place where air pollution could exist.

___05E Secondary Ambient Air Quality Standards for Fluorides.

1. Ambient air quality standards for fluorides at the more adverse and serious levels shall be those concentrations in the ambient air which result in the following values being exceeded:

a. Vegetable Crops:

Vegetable tissue intended for human use, trimmed as normally marketed or consumed shall not exceed 20 micrograms F per gram dry tissue in unwashed samples.

b. Field Crops:

(1) Middle aged fully expanded leaves of corn or sorghum intended for grain shall not, at time of tasseling, exceed 35 micrograms F per gram dry tissue in washed samples.

(2) Any field crops intended for market as hay, silage or forage shall not exceed 40 micrograms F per dry tissue in unwashed samples as marketed.

(3) Other field crops at any stage of growth shall not exceed 50 micrograms F per gram dry tissue in washed samples.

c. Cattle Forage:

(1) Running averages of 12 monthly samples of forage or hay or silage grown in the area as feed shall not exceed 40 micrograms F per gram dry tissue in unwashed samples.

(2) The average of any two consecutive months samples of forage or hay or silage grown in the area as feed shall not exceed 60 micrograms F per gram dry tissue in unwashed samples.

d. Fruit Trees, Berries and Other Commercial Crops

Fully expanded fuctional leaves shall not exceed 50 micrograms F per gram dry tissue in washed samples.

e. Deciduous Trees and Shrubs

Fully expanded functional leaves shall not exceed 100 micrograms F per gram dry tissue in washed samples.

f. Conifers and Evergreen Trees or Shrubs

Fully expanded leaves or needles of the current year shall not exceed 50 micrograms F per gram dry tissue in washed samples. Leaves and needles of prior seasons shall not exceed 75 micrograms F per gram dry tissue in washed samples.

g. Grasses and Herbs

Grasses and herbs not subject to browsing, grazing or harvest for use in feeds or food shall not exceed 150 micrograms F per gram dry tissue in washed samples.

h. Ornamental Plantings

Ornamental plantings, except trees, shrubs and turf where ___05E1d, ___05E1e, ___05E1f, and ___05E1g apply, shall not exceed 40 micrograms F per gram dry tissue in fully expanded leaves, in washed samples, at any period during the growing season.

i. Other Values

When vegetation sampling is deemed by the Department to be not practicable, unsatisfactory conditions may be assumed to exist by the Department if either:

(1) Static limed filter paper samples of 28 to 32 day exposure exceed five micrograms F per 100 square centimeters per day or,

(2) Gaseous fluorides exceed two micrograms F per cubic meter of air in any 24 hour sample and any 72 hour average exceeds 0.4 micrograms F per cubic meter of air.

2. Air Pollution Control Measures To Be Required. When and where concentrations of fluoride cause any of the values set forth in ___05E1 to be exceeded, the application of all necessary ways and means shall be required for reducing such concentrations. The ways and means to be required and the time schedule for their implementation shall be based on the premise that fluoride concen-

trations are progressively to be reduced in the shortest possible time to levels that will not cause the values in subsection ___05E1 to be exceeded.

3. Measurement of Fluoride. Methods for measuring the fluoride content of any plant tissue shall be by suitable modification of the Willard and Winter method (ref. Willard, H.H. and Winter, O.B. Volumetric Method for Determination of Fluorine. Ind. Eng. Chem. Anal. Ed. 5: 7-10, 1933) such as:

   Weinstein, L.H., R.H. Mandl, D.C. McCune, J.S. Jacobson, and A.F. Hitchcock, Semi-Automated Analysis of Fluoride in Biological Materials. J. Air Poll. Control Assoc. 15: 222-5, 1965.

   Results are expressed on a dry weight basis in washed and unwashed samples as noted. Micrograms F per gram dry tissue means micrograms of fluoride as the ion, per gram of dry material. Methods of measuring gaseous air samples shall be by the carbonate tube method or the dual tape method by Weinstein et al ref:

   Weinstein, L.H. and R.H. Mandl. The Separation and Collection of Gaseous and Particulate Fluoride. VDI Berichte. 164, 1970.

   Other methods may be used if they have been demonstrated to be equally or more specific, accurate, sensitive, and reproducible and if first approved by the Department.

(2.0) ___06 CONTROL AND PROHIBITION OF INSTALLATIONS AND OPERATIONS

___06A General. No installation or premise shall be operated or maintained in such a manner that a nuisance or air pollution is created. Nothing in this regulation shall in any manner be construed as authorizing or permitting the creation of or maintenance of a nuisance or air pollution.

___06B Circumvention. No person shall install or use any article, machine, equipment or other contrivance, the use of which, without resulting in a reduction in the total weight of emissions, conceals or dilutes an emission which would otherwise constitute a violation of any applicable air pollution control regulation.

___06C Refuse Burning Prohibited in Certain Installations. No person shall burn refuse in any plant, installation or equipment not specifically designed, constructed or modified for that purpose.

___06D Prohibition of Certain New Fuel Burning Plants.[14]

1. No person shall contruct a new fuel burning plant designed for use of residual fuel oil in which any individual furnace has a

rated heat input of less than five million BTU per hour nor shall residual fuel oil be used at any time in any new fuel burning plant having a rated heat input of less than five million BTU per hour.

2. No person shall construct a new fuel burning plant designed for use of coal in which any individual furnace has a rated heat input of less than 250 million BTU per hour nor shall coal be used at any time in any new fuel burning plant having a rated heat input of less than 250 million BTU per hour.

___06E Control of Sources of Fluoride Emissions.

1. No person shall cause, suffer, allow or permit the discharge into the atmosphere of fluorides from any installation in such combinations and in such amounts that any provision of the ambient air quality standards for fluorides set forth in ___05E is controvened.

2. Surveillance

   a. Existing Installation Surveillance Program.

   A person responsible for an installation discharging fluorides shall conduct a continuing environmental surveillance program, in a manner approved by the Department, to determine whether ambient air quality standards for fluorides are violated.

   b. New Installation Surveillance Program.

   No "Permit to Construct" will be issued for any new potential source of fluoride emissions until the applicant has conducted a survey of background levels of fluoride in the environment in a manner and to an extent approved by the Department. Applicants for a "Permit to Operate" shall be subject to the requirements of ___06E2a.

   c. Reporting.

   All data collected by the environmental programs and surveys of fluorides, required by this subsection, shall be maintained and made available to the Department in a manner and on a schedule approved by the Department. Such data shall be available to the public.

   d. Modification of Surveillance Programs.

   Any modification to the environmental programs and surveys, required under this subsection, must be approved by the Department. Such modification may be initiated by the Department.

(2.0) ___07 TRANSITION FROM PREVIOUS REGULATIONS

___07A Previous Plans for Compliance. All plans for compliance with regulations 43P03 as it became effective on January 28, 1969, which have been approved by the Secretary shall be evaluated by the Department. Any part of such plans which the Department determines relate to an installation which is subject to more restrictive emission control requirements under the terms of this amended regulation 10.30.37, as compared to the respective requirements of regulation 43P03 as it became effective on January 28, 1969, will be null and void. If a plan for compliance is declared null and void, an amended plan may be submitted to the Department.

___07B Previous Regulations Remain in Effect in Certain Cases. Provisions of regulation 43P03 as adopted on January 28, 1969 shall remain in effect with regard to installations, plants and matters dealt with in these amendments until the effective dates provided for by these amendments are applicable to the respective plants, installations or matters.

Maryland State Department of Health and Mental Hygiene
301 West Preston Street
Baltimore, Maryland 21201

(As Amended Through March 13, 1972)

10.03.38 Regulations Governing the Control of Air Pollution in Area III*

Pursuant to the authority conferred upon the Secretary of Health and Mental Hygiene by Article 43, Section 697, Annotated Code of Maryland, 1957 Edition, and Supplement, the following regulations governing the control of air pollution in Area III are hereby established as requirements of the Department of Health and Mental Hygiene.

(51.13) ___01 CONTROL AND PROHIBITION OF OPEN FIRES

___01A General. No person shall cause, suffer, allow or permit an open fire except as provided in Sections ___01B, ___01C and ___01D.

___01B Control Officer May Authorize Certain Open Fires. Subject to review by the Department, the Control Officer may upon receipt of an application made on forms provided by the Department or local fire control agency, issue or approve a permit in writing allowing an open fire provided all of the following conditions are met:

1. The Control Officer is satisfied that there is no practical alternate method for the disposal of the material to be burned or to conduct the desired activity.

2. No hazardous condition or air pollution or nuisance will be created.

3. No burning will be done within 200 yards of one or more occupied buildings or a heavily travelled public roadway, provided that on and after July 1, 1973, this distance shall not be less than 500 yards.

4. Fire control laws or regulations of other governmental agencies will not be violated.

5. No materials which produce dense smoke when burned, including but not limited to tires and roofing material, will be burned.

6. Such other conditions as the Control Officer may impose to minimize creation of smoke, to prevent nuisances and air pollution, and to protect the health, safety, comfort, and property of any persons shall be satisfied.

7. The material to be burned shall have originated on the premises on which it is to be burned.

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* Baltimore Metropolitan Area comprising Baltimore City and Anne Arundel, Baltimore, Carroll, Harford and Howard Counties.

8. Exceptions. Methods of disposal by burning acceptable to the Department may be approved for use when distance limitations cannot be met.

9. A permit may be granted for fires set in the course of agricultural operations in growing crops or raising fowl or animals or in accepted forestry practice, when distance limitations cannot be met. In no case shall this provision be construed as allowing the burning of ordinary household or barnyard trash in areas where provision is made for public collection of refuse.

___01C Public Officers May Authorize Certain Fires. Public officers, in the performance of their official duties, may set an open fire or give permission for an open fire, with concurrence of the Control Officer, provided all reasonable means are employed to minimize smoke and if the fire is necessary for one or more of the following reasons or purposes:

1. For prevention of a fire hazard that cannot be abated by other means.

2. For the instruction of public fire fighters or industrial employees under supervision of the appropriate fire control official.

3. For the protection of public health or safety when other means for disposing of hazardous materials are not available.

___01D Allowed Open Fires. Open fires otherwise in conformance with other governmental fire control ordinances and provided no nuisance or air pollution is created, are allowed without permission as follows:

1. In those areas where no provision is made for public collection of leaves, burning of leaves originating on the premises, by householders, is permitted provided that no nuisance is created and that:

    a. The fires are located no closer than 300 feet from any neighboring habitable dwelling or place where people work or congregate.

    b. The effective date of this provision is July 1, 1972.

2. In those areas where no provision is made for public collection of refuse, burning of ordinary household trash (I.I.A. Waste types 0 and 1 only) originating on the premises, excluding commercial establishments, by householders is permitted provided that:

    a. The fires are located no closer than 300 feet from any neighboring habitable dwelling or place where people work or congregate.

b. Materials are not burned which create dense smoke (emissions of an opacity or darkness greater than No. 2 on the Ringelmann Smoke Chart).

3. Cooking of food on other than commercial premises.

4. Recreational purposes, such as campfires.

5. Oil or gas fired salamanders or similar devices designed specifically for space heating or warming of outdoor workers, etc., provided no visible emissions are created.

(50.1.2) ___02 CONTROL AND PROHIBITION OF VISIBLE EMISSIONS

___02A Visible Emissions. No person shall cause, suffer, allow or permit the discharge of emissions from any installation or building, other than water in an uncombined form, which are visible to human observers.

___02B Exceptions.

1. Subsection ___02A shall not apply to emissions during the building of a new fire, cleaning of fires, soot blowing, start-up, any process modification or adjustment, or occasional cleaning or control equipment, the shade or appearance or which is not darker than No. 2 on the Ringelmann Smoke Chart, or of such opacity as to obscure an observer's view to a degree not greater than does smoke designated as No. 2 on the Ringelmann Smoke Chart, for a period or periods aggregating no more than four minutes in any sixty minutes.

2. Any person who believes that meeting the requirements of subsection ___02A above is not practical in a particular instance may request an exception to the requirements of subsection ___02A. Such a request shall be submitted to the Department in writing and include evidence to show why compliance is not practical. Based on evidence presented and other information, the Department may recommend to the Secretary that an exception be granted for a period not exceeding one year at a time under such stated terms and conditions as the Secretary may determine, provided the appellant has shown that:

   a. There presently are no practical ways or means available to enable compliance with section ___02A and;

   b. When possible, he is participating vigorously and substantially in activities directed toward finding or developing ways or means which would make it practical to reduce or eliminate visible emissions from the kind of installation which is at issue.

3. Subsection ___02A shall not apply to emissions of the following:

a. From those incinerators that are to be phased out under provisions of subsection ___06C;

b. From the burning of wood in fireplaces on premises used for residential or recreational purposes;

c. From open fires (except salamanders) permitted under provisions of subsections ___01B, ___01C and ___01D of this regulation.

(50.1) ___03 CONTROL AND PROHIBITION OF PARTICULATE MATTER EMISSIONS

(50.1) ___03A General Conditions.

1. Calculations. All calculations of particulate matter emissions shall be made in terms of grains per standard cubic foot of dry exhaust gas (gf/SCFD).

   a. Adjustment shall be made as if 50 percent excess air had been used in fuel burning equipment.

   b. Calculations made for incinerator emissions shall be adjusted to 12 percent carbon dioxide and calculated as if no auxiliary fuel has been used, except for pathological waste units which shall be corrected to 3.5 % carbon dioxide.

2. For the purposes of these regulations:

   a. "Existing installation" shall mean those erected prior to the effective date of these regulations. (Date will be noted by reference number on each specific regulation.)

   b. "New installations" shall mean those erected on or after the effective date of these regulations. (Date will be noted by reference number on each specific regulation.)

(51.5) ___03B Control of Particulate Matter from Fuel Burning Installations.

1. Residual Fuel Oil Burning Installations. No person shall cause, suffer, allow or permit particulate matter caused by the combustion of residual fuel oil to be discharged into the atmosphere in excess of the amounts shown and in accordance with the effective dates set forth in Table 1.

2. Solid Fuel Burning Installations. No person shall cause, suffer, allow or permit particulate matter caused by the combustion of solid fuel to be discharged into the atmosphere in excess of the amounts shown and in accordance with the effective dates set forth in Table 1.

3. Distillate Fuel Oil Burning Installations. No person shall cause, suffer, allow or permit the burning of distillate fuel oils in such a manner that discharges to the atmosphere exceed the amounts shown and in accordance with the effective dates set forth in Table 1.

4. Exceptions. The control officer may grant exceptions to ___03B2 and ___03B3 above under the following conditions:

   a. When the application of either requirement to a residential building housing two or less families creates undue economic hardship on individual families residing therein, or,

   b. When the installation's primary way of transferring heat is by the radiant method rather than a piped fluid system such as forced hot air, hydronic, or steam. Installations in this category would include stoves, room heaters, floor or wall mounted circulating heaters, fireplaces or similar devices.

5. Dust Collection Devices Required. No person shall cause, suffer, allow or permit the combustion of residual fuel oil or solid fuel in a fuel burning installation unless such installation is equipped with a dust collector, the collection efficiency of which meets the requirements shown in Table 1. This subsection shall become effective on the dates shown in Table 1.

(51.9) ___03C Particulate Matter from Incinerators. No person shall cause, suffer, allow or permit to be discharged into the outdoor atmosphere from any incinerator, particulate matter to exceed 0.03 gr/SCFD on or after July 1, 1973.

(51.1) ___03D Particulate Matter from Grain Drying Installations.

1. No person shall cause, suffer, allow or permit the operation of any grain drying installation unless equipped in such a manner that all exhaust gases discharged pass through a 50 mesh screen; or the installation is equipped with other equipment or incorporates design features that will accomplish equal or more effective results in reducing the discharge of particulate matter.

2. Exceptions. Mobile type grain drying installations with an operating capacity of 500 bushels per hour or less, located outside a town, village or city and at a distance greater than 300 yards from a habitable dwelling or place of business shall be exempt from ___03D1, provided no nuisance or air pollution is created.

3. Mesh sizing refers to the Tyler Standard Screen Scale.

(50.1.1) ___03E Particulate Matter from Other Installations.

1. No person shall cause, suffer, allow or permit to be discharged into the outdoor atmosphere from any other installation, particulate matter in excess of 0.03 gr/SCFD.

2. The maximum allowable weight of particulate matter discharged per hour from other installations shall not exceed that determined from Table 2. Where the process weight per hour falls between two values in the table, the maximum weight discharged per hour shall be determined by linear interpolation. When the process weight exceeds 60,000 pounds per hour, the maximum allowable weight discharged per hour will be determined by the use of the following equation:

$$E = 55.0\,P^{0.11} - 40$$

Where E = Maximum weight discharged/hour (lbs)
P = Process weight rate in tons/hour

This limitation shall supersede the requirements of section ___03E1 if it requires a lower emission rate per hour.

(51.3) ___03F Particulate Matter from Materials Handling and Construction.

1. No person shall cause, suffer, allow or permit any material to be handled, transported, or stored; or a building, its appurtenances, or a road to be used, constructed, altered, repaired or demolished without taking reasonable precautions to prevent particulate matter from becoming airborne. Such reasonable precautions shall include, when appropriate as determined by the Control Officer, but not be limited to the following:

   a. Use of water or chemicals for control of dust in the demolition of existing buildings or structures, construction operations, the grading of roads or the clearing of land;

   b. Application of asphalt, oil, water or suitable chemicals on dirt roads, materials stockpiles, and other surfaces which create airborne dusts;

   c. Installation and use of hoods, fans and dust collectors to enclose and vent the handling of dusty materials. Adequate containment methods shall be employed during sandblasting of buildings or other similar operations;

   d. Covering, at all times when in motion, open-bodied vehicles tranporting materials likely to create air pollution. Alternate means may be employed to achieve the same results as would covering;

   e. The paving of roadways and their maintenance in a clean condition.

f. The prompt removal from paved streets of earth or other material which has been transported thereto by trucks or earth moving equipment or erosion by water.

2. No person shall cause, suffer, allow or permit visible emissions beyond the lot line of the property on which the emissions originate.

___04 CONTROL AND PROHIBITION OF GAS, VAPOR AND ODOR EMISSIONS

(2.0) ___04A General.

1. Odors. No person shall cause, suffer, allow or permit the discharge into the atmosphere of gases, vapors or odors beyond the property line in such a manner that a nuisance or air pollution is created.

2. General Conditions. All calculations of emissions governed by ___04C shall be adjusted to standard condition.

(51.6) ___04B Sulfur Oxides From the Burning of Fuel. No person shall burn, sell or make available for sale any fuel unless the following conditions are met:

1. On and after the effective date of this regulation, (1) all fuels shall contain 1% or less sulfur by weight.

2. On and after July 1, 1972, distillate fuel oils shall contain 0.3% or less sulfur by weight.

(50.2) ___04C Sulfur Compounds From Other Than Fuel Burning Installations.

1. No person shall cause, suffer, allow or permit the discharge into the atmosphere from installations other than fuel burning installations, of gases containing more than 2,000 parts per million by volume of sulfur dioxide. Any such installation constructed on or after the effective date of these regulations (2) shall not discharge into the atmosphere gases containing more than 500 parts per million by volume of sulfur dioxide.

2. No person shall cause, suffer, allow or permit the discharge into the atmosphere from installations other than fuel burning installations of gases containing sulfuric acid, sulfur trioxide, or any combination thereof, greater than 70 milligrams per cubic meter reported as sulfuric acid. Any such installation constructed on or after the effective date of these regulations (3) shall not discharge into the atmosphere gases containing sulfuric acid, sulfur trioxide, or any combination thereof, greater than 35 milligrams per cubic meter reported as sulfuric acid.

(2.0) ___04D Exceptions.

1. Fuels containing sulfur in excess of the amounts specified in ___04B may be burned, sold, or made available for sale provided control equipment to desulfurize stack gases has been installed or other methods or devices are used such that the discharge of sulfur dioxide to the atmosphere does not exceed 0.5 pounds per million BTU of heat input to the associated installation in which such fuel is burned.

2. The Secretary may authorize the operation of a scavenger or recovery plant to reclaim sulfur compounds which would otherwise be emitted into the air provided the operation of such scavenger or recovery plan would reduce total emission of sulfur compounds at least 95% with said plant in operation compared to emissions when the aforementioned plant is not operating. Such authorization may result in emissions of sulfur compounds whose concentrations exceed those permitted by subsections 1 and 2 of ___04C. This subsection shall not apply to sulfuic acid manufacturing operations.

(9.0) ___04E Request for Analysis. Any person offering to sell or deliver fuel or any person responsible for equipment in which fuel is burned shall, upon request, submit to the Department or the Control Officer such analyses of the fuel as may be required to determine compliance with this section.

(50.6) ___04F Control of Odors from the Reduction of Offal and Vegetable Oil.

1. No person shall cause, suffer, allow or permit the use of any installation primarily engaged in the reduction of offal or vegetable oil unless all gases, vapors and gas-entrained matter from said installation are:

    a. First cooled to a temperature of not greater than 160° Fahrenheit and then

    b. The non-condensible fraction is incinerated at a temperature of not less than 1400° Fahrenheit for a period of not less than 0.4 second.

    c. Alternate methods may be used if determined by the Department to be equally or more effective for the purpose of controlling air pollution.

2. Any person processing or incinerating gases, vapors or gas-entrained matter as required by subsection ___04F1 shall install, operate and maintain in good working order and calibration, continuous recording devices for indicating temperature, or pressure or other operating conditions. Such devices shall be approved by the Department and all data collected shall be made available to the Department or the Control Officer for inspection

or copying upon request of the Department. Such data shall be kept on file by responsible persons for at least 60 days.

3. No person shall cause, suffer, allow or permit any offal or vegetable oil to be handled, transported or stored or to undertake the preparation of any offal or vegetable oil without taking reasonable precautions, when approved by the Department, shall include but not be limited to the following:

   a. Storage of all offal or vegetable oil, prior to or in the process of preparation, in properly enclosed and vented equipment or areas, together with the use of effective devices and/or methods to prevent the discharge of odors or odor bearing gases.

   b. Use of covered vehicles or containers of watertight construction for the handling and transporting of offal or vegetable oil.

   c. Use of hoods and fans to enclose and vent the storage, handling, preparation and conveying of any odorous materials together with effective devices and/or methods to prevent emissions of odors or odor bearing gases.

4. Whenever the emissions from an installation primarily engaged in the reduction of offal or vegetable oil create a nuisance or air pollution, beyond the property line, the Department may require that the building in which such installation is located be vented so that all emissions are treated by incineration or by other methods if determined by the Department to be equally or more effective for the purpose of controlling emissions.

5. The requirements of this subsection ___04F shall not apply to any installation engaged exclusively in the processing of food for human consumption.

(51.7) ___04G Nitrogen Oxides from Fuel Burning Equipment.

1. New Fuel Burning Equipment.(4) No person shall cause, suffer, allow or permit the discharge of nitrogen oxides into the atmosphere, from any new fuel burning equipment having a heat input rating of 250 million British Thermal Units (BTU) per hour or more, in excess of the following rates:

   a. 0.20 pounds per million BTU heat input, maximum two hour average, expressed as NO_2 when gaseous fuel is burned.

   b. 0.30 pounds per million BTU heat input, maximum two hour average, expressed as NO_2 when liquid fuel is burned.

c. 0.50 pounds per million BTU heat input, maximum two hour average, expressed as NO_2 when solid fuel is burned.

(51.10) ___04H Nitrogen Oxides from Nitric Acid Plants.

1. No person shall cause, suffer, allow or permit the discharge into the atmosphere from any new nitric acid plant, (6) nitrogen oxides in excess of 3.0 pounds per ton of acid (100 percent basis) produced.

2. No person shall cause, suffer, allow or permit the discharge into the atmosphere from any existing nitric acid plant, (7) nitrogen oxides in excess of 5.5 pounds per ton of acid (100 percent basis) produced.

(50.5) ___04I Carbon Monoxide From Other Than Fuel Burning Installations.

1. No person shall cause, suffer, allow or permit the discharge of carbon monoxide gas generated during the operation of a grey iron cupola, blast furnace, or basic oxygen steel furnace into the atmosphere unless the gas is burned with excess oxygen at 1300° or more for 0.3 seconds or longer in a direct flame afterburner or Department approved equivalent control method which reduced the concentration of carbon monoxide in the effluent to 1% by volume or less. The control method shall be equipped with an indicating pyrometer readily visible to the operator.

2. No person shall cause, suffer, allow or permit the discharge of a carbon monoxide waste gas stream from any catalyst regeneration of a petroleum cracking system, petroleum fluid coker, or other petroleum process into the atmosphere, unless the waste gas stream is burned with excess oxygen at 1300° or more for 0.3 seconds or longer in a direct flame afterburner or Department approved equivalent control method which reduces the concentration of carbon monoxide in the effluent to 1% by volume or less. The control method shall be equipped with an indicating pyrometer positioned in the working area readily visible to the operator.

3. No person shall cause, suffer, allow or permit the discharge of carbon monoxide gas from any installation which, without emission control measures, would discharge carbon monoxide gas at a rate exceeding 500 pounds per day and at a concentration exceeding 12% by volume, unless the carbon monoxide gas is burned with excess oxygen at 1300°F or more for 0.3 seconds or longer in a direct flame afterburner or Department approved equivalent control method which reduces the concentration of carbon monoxide in the effluent to 1% by volume or less. The control method shall be equipped with an indicating pyrometer readily visible to the operator.

4. Exceptions: Paragraph 3 shall not apply to:

   a. Coking process equipment used directly in the manufacture of metallurgical coke by the pyrolysis of coal in the absence of air.

   b. Process equipment designated in paragraphs 1 and 2 above.

(50.4) ___04J Hydrocarbons From Other Than Fuel Burning Installations.

1. Definitions for purposes of these regulations:

   a. "Architectural Coating" shall mean any coating used for residential, commercial or industrial buildings and their appurtenances.

   b. "Motor Vehicle Fuel" shall mean motor vehicle fuel as defined in Article 56, Section 135 (b) of the Annotated Code of Maryland.

   c. "Organic Material" shall mean chemical compounds of carbon excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbonates, metallic carbides and ammonium carbonates.

   d. "Organic Solvent" shall mean any organic material which is liquid at standard conditions and which is used as a dissolver, viscosity reducer or cleaning agent.

   e. "Photochemically Reactive Organic Solvent" shall mean any organic solvent with an aggregate of more than 20% of its total volume composed of the chemical compounds classified below or which exceeds any of the following individual percentage composition limitations referred to the total volume of solvent:

      (1) A combination of hydrocarbons, alcohols, aldehydes, esters or ketones any of which has an olefinic or cyclo-olefinic type of unsaturation: 5%.

      (2) A combination of aromatic compounds with eight or more carbon atoms to the molecule except ethylbenzene: 8%;

      (3) A combination of ethylbenzene, ketones having branched hydrocarbon structures or toluene: 20%.

   Whenever any organic solvent or any constituent of an organic solvent may be classified from its chemical structure into more than one of the above groups or organic compounds, it shall be considered as a member of the most reactive chemical group, that is, that group having the least allowable percent of the total volume of solvents. For architectural coatings only, the volume of water contained in the solvent may be used to compute the total volume of the solvent in determining percentages of photochemically reactive organic solvents.

f. "Reid Vapor Pressure" shall mean the absolute pressure in pounds per square inch determined at 100° F. and v/l = 4 (ratio of vapor volume to liquid volume, as defined in ASTM designation D 323-58) by using apparatus and procedures as standardized under the auspices of the American Society for Testing and Materials.

g. "True Vapor Pressure" shall mean the absolute pressure in pounds per square inch determined at storage conditions. Storage conditions shall be taken as the average monthly temperature to a maximum average temperature of 78° F. (Average storage temperature for May through September). True vapor pressure shall be determined by measurement at the storage conditions or by use of a nomograph, published by the Coordinating Research Council and included with these regulations as Figure 1, relating true vapor pressure to Reid vapor pressure and storage temperature.

h. "Vapor Balance Line" shall mean any connection closed to the atmosphere between the vapor space of two storage containers that will allow the vapors to be displaced as the liquid is transferred from one tank to another.

2. Organic Material.

a. After January 1, 1973, no person shall cause, suffer, allow or permit organic material having a true vapor pressure in the range of 1.5 to 11 psi inclusive to be placed, stored or held in any existing stationary tank reservoir with a capacity of greater than 65,000 gallons, or in any new stationary tank reservoir with a capacity of greater than 40,000 gallons unless the tank is equipped with one or more of the following organic material vapor control devices, properly installed, well-maintained and in operating condition.

(1) A floating roof resting on the surface of the liquid contents equipped with a closure seal, or seals, to close the space between the roof edge and tank wall, and in addition, all tank gauging and sampling devices shall be gas-tight except when in use, or

(2) A pressure tank system maintaining a pressure at all times so as to prevent organic material loss to the atmosphere, or

(3) A vapor recovery system capable of collecting the organic materials emitted from the tank and disposing of these emissions so as to prevent their emission to the atmosphere, and in addition, all tank gauging and sampling devices shall be gas-tight except when in use, or

(4) Other equipment equal or greater in efficiency to those devices listed above, and approved by the Department.

b. After January 1, 1973, no person shall cause, suffer, allow or permit organic materials having a true vapor pressure greater than 11 psi to be placed, stored or held in any existing stationary tank reservoir with a capacity of greater than 65,000 gallons, or in any new stationary tank reservoir with a capacity greater than 40,000 gallons unless equipped with one of the following organic material vapor control devices properly installed, well-maintained and in operating condition:

(1) A pressure tank system maintaining a pressure at all times so as to prevent organic material loss to the atmosphere, or

(2) A vapor recovery system capable of collecting the organic materials emitted from the tank and disposing of these emissions so as to prevent their emission to the atmosphere, and in addition, all tank gauging and sampling devices shall be gas-tight except when in use, or

(3) Other equipment equal or greater in efficiency to those devices listed above, and approved by the Department.

c. After January 1, 1974, no person shall cause, suffer, allow or permit organic material with a true vapor pressure of 1.5 psi or greater to be loaded into any tank truck, tank trailer or other contrivance from any existing loading system on any premise at which the total daily throughout (1/300 of actual annual throughput) exceeds 40,000 gallons or from any new loading system on any premise at which the total daily throughput exceeds 20,000 gallons unless the loading system is equipped with a vapor recovery system that is properly installed, well-maintained and in operation and has been approved by the Department. Additions to, or modifications or alterations of existing loading systems which increase the total daily throughput at a premise to more than 40,000 gallons shall require such a vapor recovery system for the entire loading system. All loading connections on the vapor lines shall be equipped with fittings which shall be vapor tight and will automatically and immediately close upon disconnections so as to prevent release of organic material from these fittings. The provisions of this section shall not apply to the loading of motor vehicle fuel tanks.

d. After January 1, 1974, no person shall cause, suffer, allow or permit any motor vehicle fuel with a true vapor pressure of 1.5 psi or greater to be loaded from a tank truck or trailer or other contrivance into a stationary tank having a capacity greater than 5,000 gallons, but less than 40,000 gallons and installed after January 1, 1973, unless the loading system is equipped with a vapor balance line or equally effective vapor discharge control system approved by the Department. Components of the vapor balance line consisting of a vapor space connection on the tank and a compatible vapor return line on the truck shall be installed by the following dates:

Tank connection	January 1, 1973
Truck vapor return line	January 1, 1974

e. Motor Vehicle Fuel.

(1) After May 31, 1975, a person shall not cause or permit any motor vehicle fuel with a true vapor pressure of 1.5 psi or greater to be loaded into an existing stationary tank having a capacity of less than 40,000 gallons unless the loading system is equipped with a vapor balance line or equally effective vapor discharge control system capable of a minimum of 90 percent control of the emission approved by the Department at a premise where the monthly average throughput (1/12 of the sum total throughput for the preceeding twelve months) exceeds 20,000 gallons per month. The owner or operator of any premise subject to these requirements shall submit to the Department by January 2, 1974, the following information:

Location of premise
Sum total throughput for the preceeding twelve months

Schedule for:

Negotiation of construction contract
Start of construction
Completion of construction

(2) After May 31, 1971, a person shall not cause or permit any motor vehicle fuel with a true vapor pressure of 1.5 psi or greater to be loaded into an existing stationary tank having a capacity of less than 40,000 gallons unless the loading system is equipped with a vapor balance line or equally effective vapor discharge control system capable of a minimum of 90 percent control of the emission approved by the Department at a premise where the monthly average throughput exceeds 20,000 gallons per month.

(3) A person shall not cause or permit any motor vehicle fuel tank to be filled with motor vehicle fuel with a true vapor pressure of 1.5 psi or greater from a premise where stationary tanks are equipped with vapor balance lines,

unless a vapor collecting system, approved by the Department, is installed and in good operating condition. This part shall become effective 18 months after the Department has approved two or more such vapor collection systems.

3. Organic Solvents.

   a. No person shall cause, suffer, allow or permit the discharge of any emissions of organic materials in any one day from any existing installation or building (8) in which any organic solvent or solvent containing material is in direct contact with a flame or is baked, heat-cured or heat polymerized in the presence of oxygen unless this discharge does not exceed 200 pounds per day or unless the discharge is reduced by at least 85 percent overall. The corresponding limit for new installations (9) of this type subject to regulation under this paragraph shall be 15 pounds per day or an 85 percent deduction overall.

   b. No person shall cause, suffer, allow or permit the discharge of any emissions of photochemically reactive solvent in any one day from any existing installation or building (10) not specifically defined in paragraph (a) above, used for employing, evaporating, drying, processing or manufacturing any such solvent or material containing such solvent unless this discharge does not exceed 200 pounds per day or unless the discharge is reduced by at least 85 percent overall. The corresponding limit for new installations (11) of the type subject to regulation under this paragraph shall be 40 pounds per day or an 85 percent reduction overall.

      Exceptions to this provision shall include the operation of tar heaters, coke ovens and air ventilating systems evacuating spaces in which the solvent concentration is lower than the TLV for human exposure as defined by the American Conference of Governmental Industrial Hygienists.

   c. No person shall cause, suffer, allow or permit the discharge of any emission or organic material in any one day from any premise on which any organic solvent or solvent containing material has been exposed to direct contact with a flame or is baked, heat-cured or heat polymerized in the presence of oxygen and all other discharges of photochemically reactive solvent arising on the premise to be in excess of 1,335 pounds per day unless the sum of the discharges is reduced by at least 85 percent overall.

   d. A person incinerating, absorbing or otherwise processing organic materials pursuant to this rule shall provide, properly install and maintain in calibration, in good working order and in operation, devices as specified in the authority to construct or the permit to operate, or as specified by the Department for indicating temperatures, pressures, rates of flow or other operating conditions necessary to determine the degree and effectiveness of air pollution control.

e. Drycleaning Solvent.

(1) A person shall not cause or permit the commercial use of any photochemically reactive solvent for the service of drycleaning of clothing or household items.

(2) The owner or operator of any premise subject to the requirements of this subparagraph .04J(3)d shall submit to the Department the following information by January 2, 1974:

Location of premise
Source of supply and identifying name, number or purchase specification for all drycleaning solvents used.

f. The provisions of the paragraph shall not apply to:

(1) The use of any material, in any installation or building described in subparagraphs (3)a or (3)b above, if:

(a) The volatile content of such material consists only of water and organic solvents, and

(b) The organic solvents comprise not more than 20 percent by volume of said volatile content, and

(c) The volatile content is not photochemically reactive as defined in subparagraph .04J(1)e, and

(d) The organic solvent or any material containing organic solvent does not come into contact with flame.

(2) The use of any material, in any installation or building described in subparagraphs (3)a or (3)b above, if:

(a) The organic solvent content of such material does not exceed 20 percent by volume of said material, and

(b) The volatile content is not photochemically reactive as defined in subparagraph .04J(1)e, and

(c) More than 50 percent by volume of such volatile material is evaporated before entering a chamber heated above ambient application temperature and

(d) The organic solvent or any material containing organic solvent does not come into contact with flame.

(3) The use of any material, in any installation or building described in subparagraphs (3)a or (3)b above, if:

(a) The organic solvent content of such material does not exceed 5 percent by volume of said material, and

(b) The volatile content is not photochemically reactive as defined in subparagraph .04J(1)e, and

(c) The organic solvent or any material containing organic solvent does not come into contact with flame.

4. Architectural Coating

a. Provisions of this section shall become effective on July 1, 1973. After this date, persons responsible for formulation and/or distribution of architectural coatings shall, upon request by the Department, submit a chemical analysis of solvents employed. The analysis shall contain sufficient detail to establish compliance with the provisions of these regulations. Such information shall be entitled to protection as trade secrets and the Department shall keep such information confidential.

5. Solvent Disposal

After July 1, 1973, no person shall cause, suffer, allow or permit the disposal of five gallons or more per day or 55 gallons or more per month of any photochemically reactive solvent by any means which will result in evaporation of such solvent into the atmosphere.

6. Organic Material Water Separators

After January 1, 1974, no person shall cause, suffer, allow or permit the discharge of organic material to the atmosphere from single or multiple compartment organic material water separators that receive effluent water containing 200 gallons of organic material or more per day having a true vapor pressure of 1.5 psi or greater unless one or more of the following vapor control devices is properly installed, in good working order and in operation:

a. A floating roof resting on the surface of the liquid contents equipped with a closure seal, or seals, to close the space between the roof edge and tank well, and in addition, all tank gauging and sampling devices shall be gas-tight except when in use, or

b. A vapor recovery system capable of collecting the organic materials emitted from the tank and disposing of these emissions so as to prevent their emission to the atmosphere, and in addition, all tank gauging and sampling devices shall be gas-tight except when in use, or

c. Other equally effective devices as approved by the Department.

(4.0) ___05 AMBIENT AIR QUALITY STANDARDS

___05A Definitions. For purposes of the ambient air quality standards in this section ___05 only, the following definitions shall apply:

1. Sulfur Oxides

Sulfur oxides include sulfur dioxide, sulfur trioxide, their acids, and the salts of their acids. For purposes of these ambient air quality standards, measurements of sulfur dioxide, by the method specified herein shall be taken to indicate the concentration of sulfur oxides.

2. Particulate Matter

Particulate matter includes the substances collected from and/or settling out of the atmosphere by use of the measurement procedures prescribed herein for suspended particulate matter and dustfall, respectively.

3. Non-methane Hydrocarbons

Non-methane hydrocarbons are a class of organic compounds, excluding methane, whose molecules consist primarily of atoms of hydrogen and carbon and exist in the ambient air in the gaseous state. Specifically excluded are hydrocarbons and other organic compounds associated only with suspended particles in the atmosphere. For purposes of these air quality standards non-methane hydrocarbons shall be taken to be the difference between the reported total hydrocarbons and methane values measured by the methods specified herein.

4. Photochemical Oxidants

The term photochemical oxidant is used to describe the oxidizing ability of the ambient air. Oxidants are produced in the ambient air as the result of complex photochemical reactions. Because these reactions depend on sunlight, only those oxidant concentrations occurring between 11 a.m. abd 5 p.m. EST are considered to be of photochemical origin.

___05B Precepts.

1. It is known that concentrations of air pollutants above certain levels are harmful to the health of man. However, the threshold levels at which adverse effects on man's health begin are not known with precision. It must be presumed that adverse effects over a long time period take place at concentrations lower than those now known to produce adverse effects over short time periods. Therefore, in establishing air quality standards, it is prudent to provide for margins of safety in reaching conclusions based on such data as are

available which relate health effects to pollutant levels.

2. An ambient air quality standard which would result in avoidable degradation of air quality is in conflict with applicable State law.

3. The ambient air quality standards set forth herein, represent goals expressed in terms of limits on the duration and concentration of pollutants in the atmosphere which are not to be contravened. The ambient air quality standards shall be achieved through application, under provisions of laws or regulations or otherwise, of ways and means for reducing pollutant concentrations including but not limited to removal of air pollutants from exhaust gas streams, fuel and process material changes, equipment changes, and land use management.

___05C Primary Ambient Air Quality Standards for All Substances Which May Cause Air Pollution and Control Measures To Be Required.

1. The primary ambient air quality standards for all substances which may cause air pollution shall be those lowest concentrations attainable by application of all reasonably available ways and means for reducing pollutant concentrations in the ambient air. In situations of time and place wherein the lower concentrations of any substance in the "more adverse range" as set forth herein are not exceeded, or when there is no standard at the "more adverse range", the "serious level" is not exceeded, all necessary ways and means shall be required for minimizing increases in concentrations of such substances in the ambient air, to the end that said concentrations shall not be exceeded in the future.

2. No statement, numerical standard, or time limit, contained elsewhere in ambient air quality standards shall be interpreted as mitigating in any way the necessity for and the reasonableness of applying all reasonably available ways and means for reducing pollutant concentrations in the ambient air.

___05D Secondary Ambient Air Quality Standards.

1. General.

   Secondary ambient air quality standards are presented in two categories: the more adverse range and the serious level. The concentrations denoting each category for various pollutants are presented in Table 3.

2. Air Pollution Control Measures To Be Required in the More Adverse Range. When ambient air concentrations of any pollutant listed in Table 3 are in the more adverse range, as set forth in Table 3, the application of all necessary ways and means for reducing such concentrations shall be required and the time schedule for their imple-

mentation shall be based on the premise that the pollutant concentrations are progressively to be reduced to the lower levels or less as set forth in Table 3, within the shortest reasonable time. Such reasonable time should not exceed seven years or such shorter time as may be specified under provisions of the Federal Clean Air Act.

3. Air Pollution Control Measures To Be Required at the Serious Level. When ambient air concentrations of any pollutant listed in Table 3 exceed the serious level, as set forth in Table 3, the application of all necessary ways and means shall be required for reducing such concentrations. The ways and means required and the time schedule for their implementation shall be based on the premise that the pollutant concentrations are progressively to be reduced to levels lower than the serious level concentrations set forth in Table 3 in the shortest possible time. If ambient air concentrations exceed the serious levels specified in Table 3 as of the year 1971, such concentrations should be reduced to less than the serious levels by not later than the end of calendar year 1974. If, in the future, ambient air concentrations first exceed the serious level, such shortest time should not exceed three years from the year in which the serious level is first exceeded, or such shorter time, if any, as may be required under provisions of Federal law or regulations. In determining the ways and means to be required for reducing pollutant concentrations, matters of economics and private interests and other factors shall be subordinate considerations to the necessity of achieving the standards, for protection of the public health. Additionally, if standards have been adopted for the more adverse range, measures for reducing concentrations of the pollutant further below the serious level shall be instituted in accordance with the provisions of paragraph ___05D2.

4. Measurement of Ambient Air Quality To Compare to the Standards.

   a. The method of measurement for each pollutant listed shall be the method specified in the Federal Register, Vol. 36, No. 84, Part III, April 30, 1971. Other methods may be used if they have been demonstrated to be equally or more specific, accurate, sensitive, and reproducible. Other less specific methods of measurement may be used provided a relationship is developed between results obtained by such method and the method specified and provided that the results are interpreted in terms of equivalence to those that would be expected using the listed methods, or other equally or more specific, accurate, sensitive, reproducible methods. Results shall be expressed as micrograms or milligrams of the pollutant per cubic meter of air, at 25 degrees Centigrade and 760 millimeters of mercury pressure except as specifically noted in Table 3. Such values may be converted to parts per million by volume (ppm) by utilizing the appropriate conversion factor listed in Table 3.

b. Number and Duration of Measurements.

(1) General. The measurements to be taken to compare the standards shall be made at the frequency and for the duration as noted in the following appropriate sub-paragraphs.

(2) Annual arithmetic averages shall be based on results from at least 52 sampling periods representing 24 hour periods, distributed throughout the year so as to adequately reflect the true annual average. The second highest daily average value so obtained shall be used to relate to the standards expressed as maximum exceeded once per year.

(3) Daily averages shall be based on measurements made during more than 50 percent of the time period represented. Daily averages may also be determined on the basis of a compilation of hourly averages determined as described in (6) below.

(4) Eight-hour averages shall be based upon measurements representing at least 55 percent of the designated eight-hour time periods. Eight-hour averages may also be determined on the basis of a compilation of eight hourly averages during designated time periods as described in (6) below.

(5) Three-hour averages shall be based upon measurements representing at least 55 percent of the period. Three-hour averages may also be made on the basis of a compilation of three individual hourly averages determined as described in (6) below.

(6) Hourly averages shall be based on at least seven momentary indications of the actual concentration during the hour or any more nearly complete representation of actual concentrations.

(7) Five-minute averages shall be based on samples representative of the total period. However, after a relationship has been developed between the maximum five-minute average and any other available averaging time, the relationship may be used to calculate maximum five-minute average values from such other averaging time data.

c. Location of Measurements.

Measurements of air pollutants may be made at any place where air pollution could exist.

___05F Secondary Ambient Air Quality Standards for Fluorides

1. Ambient air quality standards for fluorides at the more adverse and

serious level shall be those concentrations in the ambient air which result in the following values being exceeded:

a. Vegetable Crops:

Vegetable tissue intended for human use, trimmed as normally marketed or consumed shall not exceed 20 micrograms F per gram dry tissue in unwashed samples.

b. Field Crops:

(1) Middle aged fully expanded leaves of corn or sorghum intended for grain shall not, at time of tasseling, exceed 35 micrograms F per gram dry tissue in washed samples.

(2) Any field crops intended for market as hay silage or forage shall not exceed 40 micrograms F per grain dry tissue in unwashed samples as marketed.

(3) Other field crops at any stage of growth shall not exceed 50 micrograms F per gram dry tissue in washed samples.

c. Cattle Forage:

(1) Running averages of 12 monthly samples of forage or hay or silage grown in the area as feed shall not exceed 40 micrograms F per gram tissue in unwashed samples.

(2) The average of any two consecutive months samples of forage or hay or silage grown in the area as feed shall not exceed 60 micrograms F per gram dry tissue in unwashed samples.

(3) No monthly sample of forage or hay or silage grown in the area as feed shall exceed 80 micrograms F per gram dry tissue in unwashed samples.

d. Fruit trees, Berries, and other Commercial Crops

Fully expanded functional leaves shall not exceed 50 micrograms F per gram dry tissue in washed samples.

e. Deciduous Trees and Shrubs

Fully expanded functional leaves shall not exceed 100 micrograms F per gram dry tissue in washed samples.

f. Conifers and Evergreen Trees or Shrubs

Fully expanded leaves or needles of the current year shall not exceed 50 micrograms F per gram dry tissue in washed samples. Leaves and needles of prior seasons shall not exceed 75 micrograms F per gram dry tissue in washed samples.

g. Grasses and Herbs

Grasses and herbs not subject to browsing, grazing or harvest for use in feeds or food shall not exceed 150 micrograms F per gram dry tissue in washed samples.

h. Ornamental Plantings

Ornamental plants, except trees, shrubs and turf where ___05E1d, ___05E1e, ___05E1f, and ___05E1g apply shall not exceed 40 micrograms F per gram dry tissue in fully expanded leaves, in washed samples, at any period during the growing season.

i. Other Values

When vegetation sampling is deemed by the Department to be not practicable, unsatisfactory conditions may be assumed to exist by the Department when either:

(1) Static limed filter paper samples of 28 to 32 days exposure exceed 5 micrograms F per 100 square centimeters per day or,

(2) Gaseous fluorides exceed 2 micrograms F per cubic meter of air in any 24 hour sample and any 72 hour average exceeds 0.4 micrograms F per cubic meter of air.

2. Air Pollution Control Measures To Be Required. When and where concentrations of fluoride cause any of the values set forth in subsection ___05E1 to be exceeded, the application of all necessary ways and means shall be required for reducing such concentrations. The ways and means to be required and the time schedule for their implementation shall be based on the premise that fluoride concentrations are progressively to be reduced in the shortest possible time to levels that will not cause the values in subsection ___05F1 to be exceeded.

3. Measurement of Fluoride. Methods for measuring the fluoride content of any plant tissue shall be by suitable modification of the Willard and Winter method (ref. Willard, H. H. and Winter, O. B. Volumetric Method for Determination of Fluoride. Ind. Eng. Chem. Anal. Ed. 5: 7-10, 1933) as:

Weinstein, L., R. H. Mandl, D. C. McCune, J. S. Jacobson, and A. F. Hitchcock, Semi-Automated Analysis of Fluoride in Biological Materials. J. Air Poll. Control Assoc. 15: 222-5, 1965.

Results are expressed on a dry weight basis in washed and unwashed samples as noted. Micrograms F per gram dry tissue means micrograms of fluorides as the ion, per gram of dry material. Methods of measuring gaseous air samples shall be by the carbonate tube method or the dual tape method by Weinstein et al ref:

> Weinstein, L. H. and R. H. Mandl. The Separation and Collection of Gaseous and Particulate Fluoride. VDI Berichte. 164, 1970.

Other methods may be used if they have been demonstrated to be equally or more specific, accurate, sensitive and reproducible and if first approved by the Department.

(2.0) ___06 CONTROL AND PROHIBITION OF INSTALLATIONS AND OPERATIONS

___06A General. No installation or premise shall be operated or maintained in such a manner that a nuisance or air pollution is created. Nothing in this regulation relating to control of emissions shall in any manner be constructed as authorizing or permitting the creation of or maintenance of a nuisance or air pollution.

___06B Circumvention. No person shall install or use any article, machine, equipment or other contrivance, the use of which, without resulting in a reduction in the total weight of emissions, conceals or dilutes an emission which would otherwise constitute a violation of any applicable air pollution control regulation.

___06C Prohibition of Certain Incinerators.

1. No person shall cause, suffer, allow or permit the construction of any incinerator on or after the effective date (12) of this subsection ___06C1 if the use of such incinerator will be prohibited under provisions of subsection ___06C2.

2. No person shall cause, suffer, allow or permit the use of any flue-fed or chute-fed single chamber incinerator on or after July 1, 1972. No person shall cause, suffer, allow or permit the use of any other incinerator on or after July 1, 1973 except as provided below:

   a. Incinerators that have a burning capacity greater than two tons per hour and which are used to burn at least 5 tons of refuse per day.

   b. Crematory and pathological incinerators that are used to burn type 4 wastes (according to I.I.A. Standards) or medical wastes.

   c. Specific by-product incinerators that are used to burn type 5 or 6 wastes (according to I.I.A. Standards) and which have a burning rate of at least one ton per hour and are used to burn at least two tons per day of waste.

3. Householders are permitted to burn ordinary household trash (I.I.A. waste type 0 and 1 only) originating on the premises, in inciner-

ators, in those areas where public collection of refuse is not provided.

4. Any incinerator, the use of which is prohibited under provisions of this section, shall be made inoperable in a manner approved by the Control Officer or the Department.

___06D Refuse Burning Prohibited in Certain Installations. No person shall burn refuse in any installation or equipment not specifically designed, constructed or modified for that purpose.

___06E Prohibition of Certain New Fuel Burning Installations.

1. No person shall construct a new fuel burning installation designed for use of residual fuel oil in which any individual furnace has a heat input rate of less than five million BTU per hour nor shall residual fuel oil be used at any time in any furnace having a heat input rate of less than five million BTU per hour if the furnace was built on or after the effective date of these regulations (13).

2. No person shall construct a new fuel burning installation designed for use of solid fuels in which any individual furnace has a heat input rate of less than 250 million BTU per hour nor shall solid fuels be used at any time in any furnace having a heat input rate of less than 250 million BTU per hour if the furnace was built on or after the effective date of these regulations. (14).

___06F Control of Sources of Fluoride Emissions.

1. No person shall cause, suffer, allow or permit the discharge into the atmosphere of fluorides from any installation in such combinations and in such amounts that any provision of the ambient air quality standards for fluorides set forth in ___05E is controvened.

2. Surveillance

   a. Existing Installation Surveillance Program

      A person responsible for an installation discharging fluorides shall conduct a continuing environmental surveillance program in a manner approved by the Department, to determine whether ambient air quality standards for fluorides are violated.

   b. New Installation Surveillance Program

      No "Permit to Construct" will be issued for any new potential source of fluoride emissions until the applicant has conducted a survey of background levels of fluoride in the environment in a manner and to an extent approved by the Department. Applicants for a "Permit to Operate" shall be subject to the requirements of ___06F2a.

c. Reporting

All data collected by the environmental programs and surveys of fluorides, required by this subsection, shall be maintained and made available to the Department in a manner and on a schedule approved by the Department. Such data shall be available to the public.

d. Modification of Surveillance Programs

Any modification to the environmental programs and surveys required under this subsection, must be approved by the Department. Such modification may be initiated by the Department.

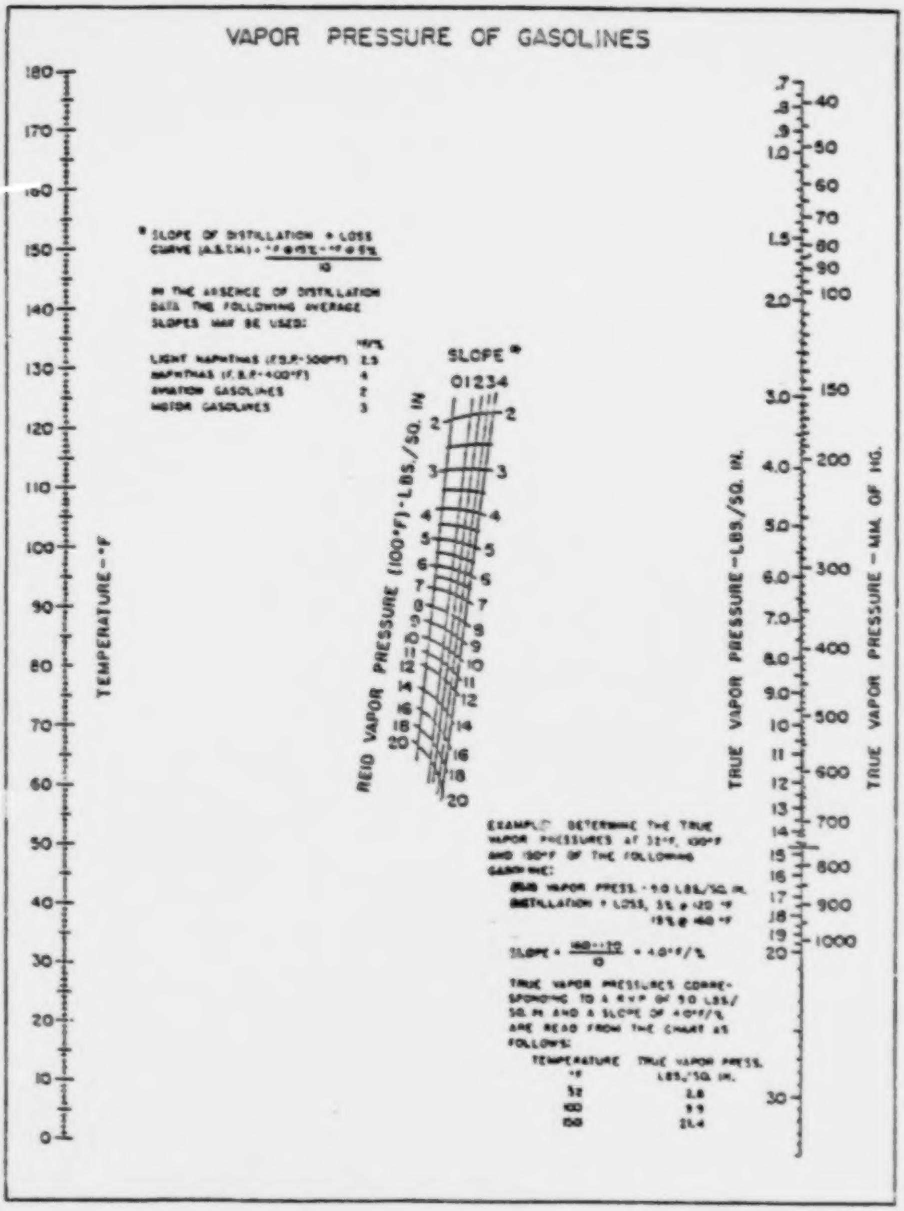
(2.0) ___07 TRANSITION FROM PREVIOUS REGULATIONS

___07A Previous Compliance. Any individual installation which, between the dates of January 28, 1969, and the date of these present amendments to regulation 10.03.38 were adopted, (15) was purchased as new equipment or was fitted with new equipment or was extensively altered, at a substantial cost, for the sole purpose of reducing emissions in order to comply with section ___0201; ___0202; ___0203; ___0204; ___0301; ___0302; ___0303; or ___0401 of regulation 43P04 as it became effective on January 28, 1969, is exempt from compliance with any respective, more restrictive provision of this amended regulation 10.03.38 until January 28, 1974, or until five years from the date of purchase, alteration, or fitting with new equipment whichever is longer, so long as the installation continues to operate in compliance with the said regulation 43P04 of January 28, 1969.

___07B Previous Plans for Compliance. All plans for compliance with regulation 43P04 which have been approved by the Board or the Secretary shall be evaluated by the Department. Any part of such plans which the Department determines relate to an installation, which is subject to more restrictive emission control requirements under terms of this amended regulation 10.03.38, as compared to the respective requirements of the previously adopted regulation 43P04, is hereby declared null and void unless actual construction or fabrication work had been started or equipment, materials or fuels had been ordered, purchased or delivered in preparation for implementing emissions reduction work on the installation involved prior to the date these present amendments to regulation 43P04 were adopted. An amended plan for compliance may be submitted to the Department.

___07C Previous Regulations Remain in Effect in Certain Cases. Provisions of regulation 43P04 as effective on January 28, 1969, shall remain in effect with regard to installations and matters dealt with in these amendments until the effective dates provided for by these amendments are applicable to the respective installations or matters.

Figure 1



Reference: Coordinating Research Countil (CRC) Handbook, PP. 244-254 (1946)

TABLE I [a]
Emission Standards and Dust Collector Performance Standards for Fuel Burning Installations

	Max. rated heat input in million BTU per hour per furnace	Effective date of Standard	Maximum allowable emission of particulate matter gr/SCFD	Maximum allowable emission; Shell-Bacharach smoke spot test number (b)	Required collection efficiency of dust collector
Residual oil burning; all installations up to 200 million BTU per hour heat input	Less than 10	Feb. 20, 1971	No requirement	6	No requirement
	Less than 10	Oct. 1, 1973	0.03	4	50% or more
	10 - 50	Feb. 20, 1971	No requirement	6	No requirement
	10 - 50	Oct. 1, 1973	0.025	4	60% or more
	51 - 200	Feb. 20, 1971	No requirement	6	No requirement
	51 - 200	Oct. 1, 1973	0.02	4	70% or more
Residual oil burning; existing and modified installations	Greater than 200	Feb. 20, 1971	0.02	4	70% or more
Residual oil burning; new fuel burning equipment	Greater than 200	Feb. 20, 1971	0.01	4	80% or more
Distillate oil burning; all installations	All sizes	Oct. 1, 1971	No requirement	3	No requirement
		Oct. 1, 1971	NO requirement	2	No requirement
Solid fuel burning; all installations	200 or less	Oct. 1, 1971	0.05	No requirement	90% or more
	Greater than 200	Oct. 1, 1971	0.03	No requirement	99% or more

(a) Relates to section __03B

(b) The method used for measurement of both residual and distillate oil burning equipment shall be in accordance with method D-2156 published by the American Society for Testing and Materials.

Table 2

MAXIMUM ALLOWABLE WEIGHT OF PARTICULATE MATTER DISCHARGED PER HOUR

Process Wt/hr (lbs)	Maximum Weight Disch/hr (lbs)	Process Wt/hr (lbs)	Maximum Weight Disch/hr (lbs)	Process Wt/hr (lbs)	Maximum Weight Disch/hr (lbs)
50 or less	0.24	1900	4.03	4700	6.45
100	0.46	2000	4.14	4800	6.52
150	0.66	2100	4.24	4900	6.60
200	0.85	2200	4.34	5000	6.67
250	1.03	2300	4.44	5500	7.03
300	1.20	2400	4.55	6000	7.37
350	1.35	2500	4.64	6500	7.71
400	1.50	2600	4.74	7000	8.05
450	1.63	2700	4.84	7500	8.39
500	1.77	2800	4.92	8000	8.71
550	1.89	2900	5.02	8500	9.03
600	2.01	3000	5.10	9000	9.36
650	2.12	3100	5.18	9500	9.67
700	2.24	3200	5.27	10000	10.00
750	2.34	3300	5.36	11000	10.63
800	2.43	3400	5.44	12000	11.28
850	2.53	3500	5.52	13000	11.89
900	2.62	3600	5.61	14000	12.50
950	2.72	3700	5.69	15000	13.13
1000	2.80	3800	5.77	16000	13.74
1100	2.97	3900	5.85	17000	14.36
1200	3.12	4000	5.93	18000	14.97
1300	3.26	4100	6.01	19000	15.58
1400	3.40	4200	6.08	20000	16.19
1500	3.54	4300	6.15	30000	22.22
1600	3.66	4400	6.22	40000	28.30
1700	3.79	4500	6.30	50000	34.30
1800	3.91	4600	6.37	60000 *	40.00

Relates to ___03E

* Process weight in excess governed by equation presented in 10.03.38 03E2.

Table 3

Ambient Air Quality Standards

Pollutant	Frequency	More Adverse Range				Serious Level		Conversion Factor
	Times values may be exceeded per unit time	ug/m^3 Lower Limit	ug/m^3 Upper Limit	ppm Lower Limit	ppm Upper Limit	ug/m^3	ppm	
1. Sulfur oxides (expressed as sulfur dioxide concentrations)								
Annual Arithmetic Average	Values not to be exceeded	39	79	0.015	0.03	79	0.03	$\frac{ug/m^3}{2620}$ = ppm
24 Hour Average	Once per year	131	262	0.05	0.10	262	0.10	
One Hour Average	8 times per month	262	525	0.10	0.20	525	0.20	
5-Minute Average	8 times per week	655	1310	0.25	0.50	1310	0.50	
2. Particulate Matter a. Suspended Particulate								
Annual Arithmetic Average	Values not to be exceeded	65	75	-	-	75	-	
24 Hour Average	Once per year	140	160	-	-	160	-	

Table 3 cont'd

Pollutant	Frequency Times values may be exceeded per unit time	More Adverse Range Lower Limit	 Upper Limit	Serious Level		Conversion Factor
b. Dustfall		$mg/cm^2/month$		$mg/cm^2/month$		
Annual Arithmetic[1] Average	Values not to be exceeded	0.35	0.50	0.50		$\frac{mg/cm^2}{.035}$ = ton/mi^2
Monthly Maximum	Values not to be exceeded	0.70	1.00	1.0		
3. Carbon Monoxide 8-Hour Arithmetic Average 2	Once per year	No standard		mg/m^3 10	ppm 9	mg/m^3 x 0.873 = ppm
Hourly Average	Once per year	No standard		40	35	
4. Non-methane Hydrocarbons[3] 3-Hour Average[4]	Once per year	No standard		$\frac{ug/m^3}{160}$	$\frac{ppm\ Carbon}{0.24}$	$\frac{ug/m^3}{655}$ = ppm
5. Photochemical Oxidants				ug/m^3	ppm Ozone	
Maximum Hourly Average	Once per year	No standard		160	0.08	$\frac{ug/m^3}{1960}$ = ppm
6. Nitrogen Dioxide				ug/m^3	ppm	
Annual Arithmetic Average	Values not to be exceeded	No standard		100	0.05	$\frac{ug/m^3}{1882}$ = ppm

References:

1. Annual averages shall be based on at least nine monthly samples.

2. Applies in areas representing generalized atmospheric levels; 20 ppm applies in any other place where members of the public congregate for extended periods of time.

3. The standards set forth in this regulation for hydrocarbons are not based upon the direct adverse effects of hydrocarbons but upon an empirical relationship, based upon ambient air quality measurements, between morning hydrocarbon concentrations and oxidant concentrations occurring later the same day. The hydrocarbon standard is designed primarily to achieve the standard for photochemical oxidants. In view of the lack of an exact quantitative relationship, the uncertainties in existing measurement techniques and a lack of full identification of the photochemically reactive species of hydrocarbons occurring in the ambient air in the region, these levels should be considered as tentative pending further scientific developments.

4. Three hour period: 6 a.m. to 9 a.m. Eastern Standard Time.

Maryland State Department of Health and Mental Hygiene
301 West Preston Street
Baltimore, Maryland 21201

(As Amended through March 13, 1972)

10.03.39 Regulations Governing the Control of Air Pollution in Area IV*

Pursuant to the authority conferred upon the Secretary of Health and Mental Hygiene by Article 43, Section 697, Annotated Code of Maryland, 1957 Edition, and Supplement, the following regulations governing the control of air pollution in Area IV are hereby established as requirements of the Department of Health and Mental Hygiene.

(51.13) ___01 CONTROL AND PROHIBITION OF OPEN FIRES

___01A General. No person shall cause, suffer, allow or permit an open fire except as provided in subsections ___01B, ___01C, and ___01D.

___01B Control Officer May Authorize Certain Open Fires. The Control Officer may, upon receipt of an application made on forms provided by the Department or local fire control agency, issue or approve a permit in writing allowing an open fire provided all of the following conditions are met:

1. The Control Officer is satisfied that there is no practical alternate method to dispose the material to be burned or to conduct the desired activity.
2. No hazardous condition or air pollution or nuisance will be created.
3. No burning will be done within 200 yards of one or more occupied buildings or a heavily travelled public roadway. On and after July 1, 1973 this distance shall be 500 yards.
4. Fire control laws or regulations of other governmental agencies will not be violated.
5. No materials which produce dense smoke when burned, including but not limited to tires and roofing material, will be burned.
6. Such other conditions as the Control Officer may impose to minimize creation of smoke, to prevent nuisances and air pollution, and to protect the health, safety, comfort, and property of any persons shall be satisfied.
7. The material to be burned shall have originated on the premises on which it is to be burned.

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* Washington Metropolitan Area comprising Montgomery and Prince George's Counties.

8. Exceptions. Methods of disposal by burning acceptable to the Department may be approved for use when distance limitations cannot be met.

___01C Public Officers May Authorize Certain Fires. Public officers, in the performance of their official duties, may set an open fire or give permission for an open fire, with concurrence of the Control Officer, provided all reasonable means are employed to minimize smoke and if the fire is necessary for one or more of the following reasons or purposes:

1. For the prevention of a fire hazard that cannot be abated by other means.

2. For the instruction of public fire fighters or industrial employees under supervision of the appropriate fire contol official.

3. For the protection of public health or safety when other means for disposing of hazardous materials are not available.

___01D Allowed Open Fires. Open fires otherwise in conformance with other governmental fire control ordinances and provided no nuisance or air pollution is created, are allowed without permission as follows:

1. In those areas where no provision is made for public collection of leaves, the open burning of leaves originating on the premises by householders is permitted.

2. In those areas where no provision is made for public collection of refuse, burning of ordinary household (I.I.A. Waste types 0 and 1 only) originating on the premises, excluding commercial establishments, by householders is permitted provided that:

    a. The fires are located no closer than 300 feet from any neighboring habitable dwelling or place where people work or congregate;

    b. Materials are not burned which create dense smoke (emissions of an opacity or darkness greater than No. 2 on the Ringelmann Smoke Chart).

3. Cooking of food on other than commercial premises.

4. Fires set in the course of agricultural operations in growing crops or raising fowl or animals or in accepted forestry practice. In no case shall this provision be construed as allowing the burning of ordinary household or barnyard trash in areas where provision is made for public collection of refuse.

5. Recreational purposes, such as campfires.

6. Oil or gas fired salamanders or similar devices designed specifically for space heating or warming of outdoor workers, etc., provided no visible emissions are created.

(50.1.2) ___02 CONTROL AND PROHIBITION OF VISIBLE EMISSIONS FROM INSTALLATIONS

___02A Visible emissions. No person shall cause, suffer, allow or permit the discharge of emissions from any installation or building other than water in an uncombined form, which are visible to human observers.

___02B Exceptions.

1. Subsection ___02A shall not apply to emissions during the building of a new fire, cleaning of fires, soot blowing, start-up, any process modification or adjustment, or occasional cleaning of control equipment, the shade or appearance of which is not darker than No. 2 on the Ringelmann Smoke Chart, or of such opacity as to obscure an observer's view to a degree not greater than does smoke designated as No. 2 on the Ringelmann Smoke Chart, for a period or periods aggregating no more than four minutes in any sixty minutes.

2. Any person who believes that meeting the requirements of subsection ___02A above is not practical in a particular instance may request an exception to the requirements of subsection ___02A. Such a request shall be submitted to the Department in writing and include evidence to show why compliance is not practical. Based on evidence presented and other information, the Department may recommend to the Secretary that an exception be granted for a period not exceeding one year at a time under such stated terms and conditions as the Secretary may determine, provided the appellant has shown that:

    a. There presently are no practical ways or means available to enable compliance with subsection ___02A and;

    b. When possible, he is participating vigorously and substantially in activities directed toward finding or developing ways or means which would make it practical to reduce or eliminate visible emissions from the kind of installation which is at issue.

3. Subsection 02A shall not apply to emissions of the following:

    a. From those incinerators that are to phased out under provisions of subsection ___06C;

    b. From the burning of wood in fireplaces on premises used for residential or recreational purposes:

    c. From open fires (except salamanders) permitted under provisions of subsections ___01B, ___01C, and ___01D of this regulation.

(50.1) ___03 CONTROL AND PROHIBITION OF PARTICULATE MATTER EMISSIONS

(50.1) ___03A General Conditions.

1. Calculations. All calculations of particulate matter emissions shall be made in terms of grains per standard cubic foot of dry exhaust gas (gr/SCFD).

    a. Calculations shall be made as if 50 percent excess air had been used in fuel burning equipment.

    b. Calculations made for incinerator emissions shall be adjusted to 12% carbon dioxide and calculated as if no auxiliary fuel had been used, except for pathological waste units which shall be converted to 3.5% carbon dioxide.

2. For the purposes of these regulations:

    a. "Existing installations" shall mean those erected prior to these regulations. (Date will be noted by reference number on specific regulations.)

    b. "New installations" shall mean those erected on or after the effective date of these regulations. (Date will be noted by reference number on specific regulations.)

(51.5) ___03B Control of Particulate Matter from Fuel Burning Installations.

1. Residual Fuel Oil Burning Installations. No person shall cause, suffer, allow or permit particulate matter caused by the combustion of residual fuel oil to be discharged into the atmosphere in excess of the amounts shown and in accordance with the effective dates set forth in Table 1.

2. Solid Fuel Burning Installations. No person shall cause, suffer, allow or permit particulate matter caused by the combustion of solid fuel to be discharged into the atmosphere in excess of the amounts shown and in accordance with the effective dates set forth in Table 1.

3. Distillate Fuel Oil Burning Installations. No person shall cause, suffer, allow or permit the burning of distillate oils in such a manner that discharges to the atmosphere exceed the amounts shown and in accordance with the effective dates set forth in Table 1.

4. Exceptions. The Control Officer may grant exceptions to ___03B2

and ___03B3 above under the following conditions:

a. When the application of either requirement to a residential building housing two or less families creates undue economic hardship on individual families residing therein or,

b. When the installation's primary way of transferring heat is by the radiant method rather than a piped fluid system such as forced hot air, hydronic, or steam. Installations in this category would include stoves, room heaters, floor or wall mounted circulating heaters, fireplaces or similar devices.

5. Dust Collection Devices Required. No person shall cause, suffer, allow or permit the combustion of residual fuel oil or solid fuel in a fuel burning installation unless such installation is equipped with a dust collector, the collection efficiency of which meets the requirements shown in Table 1. This subsection shall become effective on the dates shown in Table1.

(51.9) ___03C Particulate Matter from Incinerators. No person shall cause, suffer, allow or permit to be discharged into the atmosphere from any incinerator, particulate matter to exceed 0.03 gr/SCFD on or after July 1, 1973.

(51.1) ___03D Particulate Matter from Grain Drying Installations.

1. No person shall cause, suffer, allow or permit the operation of any grain drying installation unless equipped in such a manner that all exhaust gases discharged pass through a 50 mesh screen; or the installation is equipped with other equipment or incorporates design features that will accomplish equal or more effective results in reducing the discharge of particulate matter.

2. Exceptions. Mobile type grain drying installations with an operating capacity of 500 bushels per hour or less, located outside a town, village or city and at a distance greater than 300 yards from a habitable dwelling or place of business shall be exempt from ___03D1, provided no nuisance or air pollution is created.

3. Mesh sizing refers to the Tyler Standard Screen Scale.

(50.1.1) ___03E Particulate Matter from Other Installations.

1. No person shall cause, suffer, allow or permit to be discharged into the atmosphere from any other installation, particulate matter in excess of 0.03 gr/SCFD.

2. The maximum allowable weight of particulate matter discharged

per hour from other installations shall not exceed that determined from Table 2. Where the process weight per hour falls between two values in the table, the maximum weight discharged per hour shall be determined by linear interpolation. This limitation shall supersede the requirements of section ___03E1 if it requires a lower emissions rate per hour.

(51.3) ___03F Particulate Matter from Materials Handling and Construction and Other Acts.

1. No person shall cause, suffer, allow or permit any materials to be handled, transported, or stored; or a building, its appurtenances, or a road to be used, constructed, altered, repaired or demolished; or maintain any premises; or do any act without taking reasonable precautions to prevent particulate matter from becoming airborne. Such reasonable precautions shall include, when appropriate as determined by the Control Officer, but not be limited to the following:

   a. Use of water or chemicals for control of dust in the demolition of exsiting buildings or structures, construction operations, the grading of roads or the clearing of land;

   b. Application of asphalt, oil, water or suitable chemicals on dirt roads, materials stockpiles, and other surfaces which can create airborne dusts;

   c. Installation and use of hoods, fans and dust collectors to enclose and vent the handling of dusty materials. Adequate containment methods shall be employed during sandblasting of buildings or other similar operations;

   d. Covering, at all times when in motion, open-bodied vehicles transporting materials likely to create air pollution. Alternate means may be employed to achieve the same results as would covering;

   e. The paving of roadways and their maintenance in a clean condition;

   f. The prompt removal from paved streets of earth or other material which has been transported thereto by trucks or earth moving equipment or erosion by water.

2. No person shall cause, suffer, allow or permit visible emissions beyond the lot line of the property on which the emissions originate.

___04 CONTROL AND PROHIBITION OF GAS, VAPOR AND ODOR EMISSIONS

(2.0) ___04A General.

1. Odors. No person shall cause, suffer, allow or permit the discharge into the atmosphere of gases, vapors or odors beyond the property line in such manner that a nuisance or air pollution is created.

2. General Conditions. All calculations of emissions governed by ___04C shall be adjusted to standard conditions.

(51.6) ___04B Sulfur Oxides From the Burning of Fuel. No person shall burn, sell or make available for sale any fuel unless the following conditions are met:

1. On and after the effective date of this regulation, (1) all fuels shall contain 1% or less sulfur by weight.

2. On and after July 1, 1972, distillate fuel oils shall contain 0.3% or less sulfur by weight.

(50.2) ___04C Sulfur Compounds From Other Than Fuel Burning Installations.

1. No person shall cause, suffer, allow or permit the discharge into the atmosphere from installations other than fuel burning installations of gases containing more than 2,000 parts per million by volume of sulfur dioxide. Any such installation constructed after the effective date of these regulations (2) shall not discharge into the atmosphere gases containing more than 500 parts per million by volume of sulfur dioxide.

2. No person shall cause, suffer, allow or permit the discharge into the atmosphere from installations other than fuel burning installations, of gases containing sulfuric acid, sulfur trioxide, or any combination thereof, greater than 70 milligrams per cubic meter reported as sulfuric acid. Any such installation contructed after the effective date of these regulations (3) shall not discharge into the atmosphere gases containing sulfuric acid, sulfur trioxide, or any combination thereof greater than 35 milligrams per cubic meter reported as sulfuric acid.

(2.0) ___04D Exceptions.

1. Fuels containing sulfur in excess of the amounts specified in ___04B may be burned, sold, or made available for sale provided control equipment to desulfurize stack gases has been installed or other methods or devices are employed by the user or purchaser that will produce results equivalent to those that would have resulted from the burning of fuel meeting the sulfur requirements specified in ___04B.

2. Secretary may authorize the operation of a scavenger or recovery plant to reclaim sulfur compounds which would otherwise be emitted into the air provided the operation of such scavenger or re-

covery plant would reduce total emission of sulfur compounds at least 95% with said plant in operation compared to emissions when the aforementioned plant is not operating. Such authorization may result in emission of sulfur compounds whose concentration exceed those permitted by subsections 1 and 2 of ___04C. This subsection shall not apply to sulfuric acid manufacturing operations.

(9.0) ___04E Request for Analysis. Any person offering to sell or deliver fuel or any person responsible for equipment in which fuel is burned shall, upon request, submit to the Department or the Control Officer such analyses of the fuel as may be required to determine compliance with this section.

(50.6) ___04F Control of Odors from the Reduction of Offal and Vegetable Oil.

1. No person shall cause, suffer, allow or permit the use of any installation primarily engaged in the reduction of offal or vegetable oil unless all gases, vapors and gas-entrained matter from said installation are:

   a. First cooled to a temperature of not greater than 160° F and then

   b. The non-condensible fraction is incinerated at a temperature of not less than 1400° F for a period of not less than 0.4 second.

   c. Alternate methods may be used if determined by the Department to be equally or more effective for the purpose of controlling air pollution.

2. Any person processing or incinerating gases, vapors or gas-entrained matter as required by subsection ___04F2 shall install, operate and maintain in good working order and calibration, continuous recording devices for indicating temperature, or pressure or other operating conditions. Such devices shall be approved by the Department or the Control Officer for inspection or copying upon request of the Department. Such data shall be kept on file by responsible persons for at least 60 days.

3. No person shall cause, suffer, allow or permit any offal or vegetable oil to be handled, transported or stored or to undertake the preparation of any offal or vegetable oil without taking reasonable precautions, when approved by the Department, shall include but not be limited to the following:

   a. Storage of all offal or vegetable oil, prior to or in the process of preparation, in properly enclosed and vented equipment or areas, together with the use of effective devices and/or methods to prevent the discharge of odors or odor bearing gases.

   b. Use of covered vehicles or containers of watertight construction for the handling and transporting of offal or vegetable oil.

c. Use of hoods and fans to enclose and vent the storage, handling, preparation and conveying of any odorous materials together with effective devices and/or methods to prevent emissions of odors or

4. Whenever the emissions from an installation primarily engaged in the reduction of offal or vegetable oil create a nuisance or air pollution, beyond the property line, the Department may require that the building in which such installation is located be vented so that all emissions are treated by incineration or by other methods if determined by the Department to be equally or more effective for the purpose of controlling emissions.

5. The requirements of this subsection ___o4F shall not apply to any installation engaged exclusively in the processing of food for human consumption.

(51.7) ___04G Nitrogen Oxides from Fuel Burning Equipment.

1. New Fuel Burning Equipment.[4] No person shall cause, suffer, allow or permit the discharge of nitrogen oxides into the atmosphere, from any new fuel burning equipment having a heat input rating of 250 million British Thermal Units (BTU) per hour or more, in excess of the following rates:

a. 0.20 pounds per million BTU heat input, maximum two hour average, expressed as NO_2 when gaseous fuel is burned.

b. 0.30 pounds per million BTU heat input, maximum two hour average, expressed as NO_2 when liquid fuel is burned.

c. 0.50 pounds per million BTU heat input, maximum two hour average, expressed as NO_2 when solid fuel is burned.

(51.10) ___04H Nitrogen Oxides from Nitric Acid Plants.

1. No person shall cause, suffer, allow or permit the discharge into the atmosphere from any new nitric acid plant,[6] nitrogen oxides in excess of 3.0 pounds per tons of acid (100 percent basis) produced.

2. No person shall cause, suffer, allow or permit the discharge into the atmosphere from any existing nitric acid plant, nitrogen oxides in excess of 5.5 pounds per ton of acid (100 percent basis) produced.

(50.5) ___04I Carbon Monoxide from other than Fuel Burning Installations.

1. No person shall cause, suffer, allow or permit the discharge of carbon monoxide gas generated during the operation of a grey iron cupola, blast furnace, or basic oxygen steel furnace into the atmosphere unless the gas is burned with excess oxygen at 1300° or more for 0.3 seconds or longer in a direct flame afterburner or Depart-

ment approved equivalent control method which reduces the concentration of carbon monoxide in the effluent to 1% by volume or less. The control method shall be equipped with an indicating pyrometer readily visible to the operator.

2. No person shall cause, suffer, allow or permit the discharge of a carbon monoxide waste gas stream from any catalyst regeneration of a petroleum cracking system, petroleum fluid coker, or other petroleum process into the atmosphere, unless the waste gas stream is burned with excess oxygen at 1300° or more for 0.3 seconds or longer in a direct flame afterburner or Department approved equivalent control method which reduces the concentration of carbon monoxide in the effluent to 1% by volume or less. The control method shall be equipped with an indicating pyrometer positioned in the working area readily visible to the operator.

3. No person shall cause, suffer, allow or permit the discharge of carbon monoxide gas from any installation which, without emission control measures, would discharge carbon monoxide gas at a rate exceeding 500 pounds per day and at a concentration exceeding 12% by volume, unless the carbon monoxide gas is burned with excess oxygen at 1300° F or more for 0.3 seconds or longer in a direct flame afterburner or Department approved equivalent control method which reduces the concentration of carbon monoxide in the effluent to 1% by volume or less. The control method shall be equipped with an indicating pyrometer readily visible to the operator.

4. Exceptions: Paragraph 3 shall not apply to:

   a. Coking process equipment used directly in the manufacture of metallurgical coke by the pyrolysis of coal in the absence of air.

   b. Process equipment designated in paragraphs 1 and 2 above.

(50.4) ___04J Hydrocarbons From Other Than Fuel Burning Installations.

1. Definitions for purposes of these regulations:

   a. "Architectural Coating" shall mean any coating used for residential, commercial or industrial buildings and their appurtances.

   b. "Motor Vehicle Fuel" shall mean motor vehicle fuel as defined in Article 56, Section 135 (b) of the Annotated Code of Maryland.

   c. "Organic Material" shall mean chemical compounds of carbon excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbonates, metallic carbides and ammonium carbonates.

   d. "Organic Solvent" shall mean any organic material which is liquid at standard conditions and which is used as a dissolver, viscosity reducer or cleaning agent.

e. "Photochemically Reactive Organic Solvent" shall mean any organic solvent with an aggregate of more than 20% of its total volume composed of the chemical compounds classified below or which exceeds any of the following individual percentage composition limitations referred to the total volume of solvent:

(1) A combination of hydrocarbons, alcohols, aldehydes, esters or ketones any of which has an alefinic or cyclo-olefinic type of unsaturation: 5%.

(2) A combination of aromatic compounds with eight or more carbon atoms to the molecule except ethylbenzene: 8%;

(3) A combination of ethylbenzene, ketones having branched hydrocarbon structures or toluene: 20%.

Whenever any organic solvent or any constituent of an organic solvent may be classified from its chemical structure into more than one of the above groups or organic compounds, it shall be considered as a member of the most reactive chemical group, that is, that group having the least allowable percent of the total volume of solvents.

For architectural coatings only, the volume of water contained in the solvent may be used to compute the total volume of the solvent in determining percentages of photochemically reactive organic solvents.

f. "Reid Vapor Pressure" shall mean the absolute pressure in pounds per square inch determined at 100° F and v/l = 4 (ratio of vapor volume to liquid volume, as defined in ASTM designation D 323 - 58) by using apparatus and procedures as standardized under the auspices of the American Society for Testing and Materials.

g. "True Vapor Pressure" shall mean the absolute pressure in pounds per square inch determined at storage conditions. Storage conditions shall be taken as the average monthly temperature to a maximum average temperature of 78° F (average storage temperature for May through September). True vapor pressure shall be determined by measurement at the storage conditions or by the use of a nomograph, published by the Coordinating Research Council and included with these regulations as Figure 1, relating true vapor pressure to Reid vapor pressure and storage temperature.

h. "Vapor Balance Line" shall mean any connection closed to the atmosphere between the vapor space of two storage containers that will allow the vapors to be displaced as the liquid is transferred from one tank to the other.

2. Organic Material

a. After January 1, 1973, no person shall cause, suffer, allow or permit organic material having a true vapor pressure in the range of 1.5 to 11 psi inclusive to be placed, stored or held in any existing stationary tank reservoir with a capacity of greater than 65,000 gallons, or in any new stationary tank reservoir with a capacity of greater than 40,000 gallons unless the tank is equipped with one or more of the following organic material vapor control devices, properly installed, well- maintained and in operating condition.

(1) A floating roof resting on the surface of the liquid contents equipped with a closure seal, or seals, to close the space between the roof edge and tank wall, and in addition, all tank gauging and sampling devices shall be gastight except when in use, or

(2) A pressure tank system maintaining a pressure at all times so as to prevent organic material loss to the atmosphere, or

(3) A vapor recovery system capable of collecting the organic materials emitted from the tank and disposing of these emissions so as to prevent their emission to the atmosphere, and in addition, all tank gauging and sampling devices shall be gas-tight except when in use, or

(4) Other equipment equal or greater in efficiency to those devices listed above, and approved by the Department.

b. After January 1, 1973, no person shall cause, suffer, allow or permit organic materials having a true vapor pressure greater than 11 psi to be placed, stored or held in any existing stationary tank reservoir with a capacity of greater than 65,000 gallons, or in any new stationary tank reservoir with a capacity greater than 40,000 gallons unless equipped with one of the following organic material vapor control devices properly installed, well-maintained and in operating condition:

(1) A pressure tank system maintaining a pressure at all times so as to prevent organic material loss to the atmosphere, or

(2) A vapor recovery system capable of collecting the organic materials emitted from the tank and disposing of these emissions so as to prevent their emission to the atmosphere, and in addition, all tank gauging and sampling devices shall be gas-tight except when in use, or

(3) Other equipment equal or greater in efficiency to those devices listed above, and approved by the Department.

c. After January 1, 1974, no person shall cause, suffer, allow or permit organic material with a true vapor pressure of 1.5 psi or greater to be loaded into any tank truck, tank trailer or other contrivance from any existing loading system on any premise at which the total daily throughput (1/300 of actual annual throughput) exceeds 40,000 gallons or from any new loading system on any premise at which the total daily throughput exceeds 20,000 gallons unless the loading system is equipped with a vapor recovery system that is properly installed, well-maintained and in operation and has been approved by the Department. Additions to, or modifications or alterations of existing loading systems which increase the total daily throughput at a premise to more than 40,000 gallons shall require such a vapor recovery system for the entire loading system. All loading connections on the vapor lines shall be equipped with fittings which shall be vapor tight and will automatically and immediately close upon disconnection so as to prevent release of organic material from these fittings. The provisions of this section shall not apply to the loading of motor vehicle fuel tanks.

d. After January 1, 1974, no person shall cause, suffer, allow or permit any motor vehicle fuel with a true vapor pressure of 1.5 psi or greater to be loaded from a tank truck or trailer or other contrivance into a stationary tank having a capacity greater than 5,000 gallons, but less than 40,000 gallons and installed after January 1, 1973, unless the loading system is equipped with a vapor balance line or equally effective vapor discharge control system approved by the Department. Components of the vapor balance line consisting of a vapor space connection on the tank and a compatible vapor return line on the truck shall be installed by the following dates:

Tank connection	January 1, 1973
Truck vapor return line	January 1, 1974

e. Motor Vehicle Fuel.

(1) After May 31, 1975, a person shall not cause or permit any motor vehicle fuel with a true vapor pressure of 1.5 psi or greater to be loaded into an existing stationary tank having a capacity of less than 40,000 gallons unless the loading system is equipped with a vapor balance line or equally effective vapor discharge control system capable of a minimum of 90 percent control of the emission approved by the Department at a premise where the monthly average throughput (1/12 of the sum total throughput for the preceeding twelve months) exceeds 50,000 gallons per month. The owner or operator of any premise subject to these requirements shall submit to the Department by January 2, 1974, the following information:

Sum total throughput for the preceeding twelve months
Schedule for:

Negotiation of construction contract
Start of construction
Completion of construction

(2) After May 31, 1977, a person shall not cause or permit any motor vehicle fuel with a true vapor pressure of 1.5 psi or greater to be loaded into an existing stationary tank having a capacity of less than 40,000 gallons unless the loading system is equipped with a vapor balance line or equally effective vapor discharge control system capable of a minimum of 90 percent control of the emission approved by the Department at a premise where the monthly average throughput exceeds 20,000 gallons per month. (For facilities having a throughput of less than 20,000 gallons per month, 52.1086 is in effect).

3. Organic Solvents

a. No person shall cause, suffer, allow or permit the discharge of any emissions of organic material in any one day from any existing installation or building in which any organic solvent or solvent containing material is in direct contact with a flame or is baked, heat-cured or heat polymerized in the presence of oxygen unless this discharge does not exceed 200 pounds per day unless the discharge is reduced by at least 85 percent overall. The corresponding limit for new installations (9) of the type subject to regulation under this paragraph shall be 15 pounds per day or an 85 percent reduction overall.

b. No person shall cause, suffer, allow or permit the discharge of any emissions of photochemically reactive solvent in any one day from any existing installation or building (10) not specifically defined in paragraph (a) above, used for employing, applying, evaporating, drying, processing or manufacturing any such solvent or material containing such solvent unless this discharge does not exceed 200 pounds per day or unless the discharge is reduced by at least 85% overall. The corresponding limit for new installations (11) of the type subject to regulation under this paragraph shall be 40 pounds per day or an 85% reduction overall.

Exceptions to this provision shall include the operation of tar heaters, coke ovens and air ventilating systems evacuating spaces in which the solvent concentration is lower than the TLV for human exposure as defined by the American Conference of Governmental Industrial Hygienists.

c. No person shall cause, suffer, allow or permit the discharge of any emission of organic material in any one day from any premise on which any organic solvent or solvent containing material has been exposed to direct contact with a flame or is baked, heat-cured or heat polymerized in the presence of oxygen and all other discharges of photochemically reactive solvent arising on the premise to be in excess of 1,335 pounds per day unless the sum of the discharges is reduced by at least 85% overall.

d. A person incinerating, absorbing or otherwise processing organic materials pursuant to this rule shall provide, properly install and maintain in calibration, in good working order and in operation devices as specified in the authority to construct or the permit to operate, or as specified by the Department for indicating temperatures, pressures, rates of flow or other operating conditions necessary to determine the degree and effectiveness of air pollution control.

e. Drycleaning Solvent.

(1) A person shall not cause or permit the commercial use of any photochemically reactive solvent for the service of drycleaning of clothing or household items.

(2) The owner or operator of any premise subject to the requirements of this subparagraph .04J(3)d shall submit to the Department the following information by January 2, 1974:

Location of premise
Source of supply and identifying name, number or purchase specification for all drycleaning solvents used

f. The provisions of this paragraph shall not apply to:

(1) The use of any material, in any installation or building described in subparagraphs (3)a or (3)b above, if:

(a) The volatile content of such material consists only of water and organic solvents, and

(b) The organic solvents comprise not more than 20 percent by volume of said volatile content, and

(c) The volatile content is not photochemically reactive as defined in subparagraph .04J(1)e, and

(d) The organic solvent or any material containing organic solvent does not come into contact with flame.

(2) The use of any material, in any installation or building described in subparagraphs (3)a or (3)b above, if:

(a) The organic solvent content of such material does not exceed 20 percent by volume of said material, and

(b) The volatile content is not photochemically reactive as defined in subparagraph .04J(1)e, and

(c) More than 50 percent by volume of such volatile material is evaporated before entering a chamber heated above ambient application temperature and

(d) The organic solvent or any material containing organic solvent does not come into contact with flame.

(3) The use of any material, in any installation or building described in subparagraphs (3)a or (3)b above, if:

(a) The organic solvent content of such material does not exceed 5 percent by volume of said material, and

(b) The volatile content is not photochemically reactive as defined in subparagraph .04J(1)e, and

(c) The organic solvent or any material containing organic solvent does not come into contact with flame.

4. Architectural Coating

a. No person shall cause, suffer, allow or permit anyone to sell, or offer for sale, any architectural coatings containing a photochemically reactive solvent in containers of greater than one gallon capacity, nor shall any person apply or evaporate such architectural coatings from such containers.

b. No person shall cause, suffer, allow or permit anyone to sell, or offer for sale, photochemically reactive solvents as thinners or diluents for architectural coatings in containers of greater than one gallon capacity.

c. No person shall cause, suffer, allow or permit anyone to thin or dilute any architectural coating in quantities greater than one quart of a photochemically reactive solvent per gallon of architectural coating.

d. Provisions of this section shall become effective on July 1, 1973. After this date, persons responsible for formulation and/or distribution of architectural coatings shall, upon request by the Department, submit a chemical analysis of solvents employed. The analysis shall contain sufficient detail to establish compliance with the provisions of these regulations. Such information shall be entitled to protection as trade secrets and the Department shall keep such information confidential.

5. Solvent Disposal

After July 1, 1973, no person shall cause, suffer, allow or permit the disposal of five gallons or more per day or 55 gallons or more per month of any photochemically reactive solvent by any means which will result in evaporation of such solvent into the atmosphere.

6. Organic Material Water Separators

After January 1, 1974, no person shall cause, suffer, allow or permit the discharge of organic material to the atmosphere from single or multiple compartment organic material water separators that receive effluent water containing 200 gallons of organic material or more per day having a true vapor pressure of 1.5 psi or greater unless one or more of the following vapor control devices is properly installed, in good working order and in operation:

a. A floating roof resting on the surface of the liquid contents equipped with a closure seal, or seals, to close the space between the roof edge and tank wall, and in addition, all tank gauging and sampling devices shall be gas-tight except when in use, or

b. A vapor recovery system capable of collecting the organic materials emitted from the tank and disposing of these emissions so as to prevent their emission to the atmosphere, and in addition, all tank gauging and sampling devices shall be gas-tight except when in use, or

c. Other equally effective devices as approved by the Department.

(4.0) ___05 AMBIENT AIR QUALITY STANDARDS

___05A Definitions. For purposes of the ambient air quality standards in this section ___05 only, the following definitions shall apply.

1. Sulfur Oxides

Sulfur oxides include sulfur dioxide, sulfur trioxide, their acids, and the salts of their acids. For purposes of these ambient air quality standards, measurements of sulfur dioxide, by the method specified herein, shall be taken to indicate the concentration of sulfur oxides.

2. Particulate Matter

Particulate matter includes the substances collected from and/or settling out of the atmosphere by use of the measurement procedures prescribed herein for suspended particulate matter and dustfall, respectively.

3. Non-methane Hydrocarbons

Non-methane hydrocarbons are a class of organic compounds, excluding methane, whose molecules consist primarily of atoms of hydrogen and carbon and exist in the ambient air in the gaseous state. Specifically excluded are hydrocarbons and other organic compounds associated only with suspended particles in the atmosphere. For purposes of these air quality standards non-methane hydrocarbons shall be taken to be the difference between the reported total hydrocarbons and methane values measured by the methods specified herein.

4. Photochemical Oxidants

The term photochemical oxidant is used to describe the oxidizing ability of the ambient air. Oxidants are produced in the ambient air as the result of complex photochemical reactions. Because these reactions depend on sunlight, only those odixant concentrations occurring between 11 a.m. abd 5 p.m. EST are considered to be of photochemical origin.

___05B Precepts .

1. It is known that concentrations of air pollutants above certain levels are harmful to the health of man. However, the threshold level at which adverse effects on man's health begin are not known with precision. It must be presumed that adverse effects over a long time period take place at concentrations lower than those now known to produce adverse effects over short time periods. Therefore, in establishing air quality standards, it is prudent to provide for margins of safety in reaching conclusions based on such data as are available which relate health effects to pollutant levels.

2. An ambient air quality standard which would result in avoidable degradation of air quality is in conflict with applicable State law.

3. The ambient air quality standard set forth herein, represent goals expressed in terms of limits on the duration and concentration of pollutants in the atmosphere which are not to be contravened. The ambient air quality standards shall be achieved through application, under provisions of laws or regulations or otherwise, of ways and means for reducing pollutant concentrations including but not limited to removal of air pollutants from exhaust gas streams, fuel and process material changes, equipment changes, and land use management.

___05C Primary Ambient Air Quality Standards for all Substances Which May Cause Air Pollution and Control Measures To Be Required.

1. The primary ambient air quality standards for all substances which

may cause air pollution shall be those lowest concentrations attainable by application of all reasonably available ways and means for reducing pollutant concentrations in the ambient air. In situations of time and place wherein the lower concentrations of any substance in the "more adverse range" as set forth herein are not exceeded, or when there is no standard at the "more adverse range," the "serious level" is not exceeded, all necessary ways and means shall be required for minimizing increases in concentrations of such substances in the ambient air, to the end that said concentrations shall not be exceeded in the future.

2. No statement, numerical standard, or time limit, contained elsewhere in ambient air quality standards shall be interpreted as mitigating in any way the necessity for and the reasonableness of applying all reasonably available ways and means for reducing pollutant concentrations in the ambient air.

___05D Secondary Ambient Air Quality Standards.

1. General

Secondary ambient air quality standards are presented in two categories: the more adverse range and the serious level. The concentrations denoting each category for various pollutants are presented in Table 3.

2. Air Pollution Control Measures To Be Required in the More Adverse Range. When ambient air concentrations of any pollutant listed in Table 3 are in the more adverse range, as set forth in Table 3, the application of all necessary ways and means for reducing such concentrations shall be required and the time schedule for their implementation shall be based on the premise that the pollutant concentrations are progressively to be reduced to the lower levels or less as set forth in Table 3, within the shortest reasonable time. Such reasonable time should not exceed seven years or such shorter time as may be specified under provisions of the Federal Clean Air Act.

3. Air Pollution Control Measures To Be Required at the Serious Level. When ambient air concentrations of any pollutant listed in Table 3 exceed the serious level, as set forth in Table 3, the application of all necessary ways and means shall be required for reducing such concentrations. The ways and means required and the time schedule for their implementation shall be based on the premise that the pollutant concentrations are progressively to be reduced to levels lower than the serious level concentrations set forth in Table 3 in the shortest possible time. If ambient air concentrations exceed the serious levels specified in Table 3 as of the year 1971, such concentrations should be reduced to less than the serious levels by not later than the end of calendar year 1974. If, in the future, ambient air concentrations first exceed the serious level, such

shortest time should not exceed three years from the year in which the serious level is first exceeded, or such shorter time, if any, as may be required under provisions of Federal law or regulations. In determining the ways and means to be required for reducing pollutant concentrations, matters of economics and private interests and other factors shall be subordinate considerations to the necessity of achieving the standards, for protection of the public health. Additionally, if standards have been adopted for the more adverse range, measures for reducing concentrations of the pollutant further below the serious level shall be instituted in accordance with the provisions of paragraph ___05D2.

4. Measurement of Ambient Air Quality to Compare to the Standards.

   a. The method of measurement for each pollutant listed shall be the method specified in the Federal Register, Vol. 36, No. 84, Part III, April 30, 1971. Other methods may be used if they have been demonstrated to be equally or more specific, accurate, sensitive, and reproducible. Other less specific methods of measurement may be used provided a relationship is developed between results obtained by such method and the method specified and provided that the results are interpreted in terms of equivalence to those that would be expected using the listed methods, or other equally or more specific, accurate, sensitive, reproducible methods. Results shall be expressed as micrograms or milligrams of the pollutant per cubic meter of air, at 25 degrees centigrade and 760 millimeters of mercury pressure except as specifically noted in Table 3. Such values may be converted to parts per million by volume (ppm) by utilizing the appropriate conversion factor listed in Table 3.

   b. Number and Duration of Measurements

      (1) General. The measurements to be taken to compare the standards shall be made at the frequency and for the duration as noted in the following appropriate subparagraphs.

      (2) Annual arithmetic averages shall be based on results from at least 52 sampling periods representing 24 hour periods, distributed throughout the year so as to adequately reflect the true annual average. The second highest daily average value so obtained shall be used to relate to the standards expressed as maximum exceeded once per year.

      (3) Daily averages shall be based on measurements made during more than 50 percent of the time period represented. Daily averages may also be determined on the basis of a compilation of hourly averages determined as described in (6) below.

      (4) Eight-hour averages shall be based upon measurements

representing at least 55 percent of the designated eight-hour time periods. Eight-hour averages may also be determined on the basis of a compilation of eight hourly averages during designated time periods as described in (6) below.

(5) Three-hour averages shall be based upon measurements representing at least 55 percent of the period. Three-hour averages may also be made on the basis of a compilation of three individual hourly averages determined as described in (6) below.

(6) Hourly averages shall be based on at least seven momentary indications of the actual concentration during the hour or any more nearly complete representation of actual concentrations.

(7) Five-minute averages shall be based on samples representative of the total period. However, after a relationship has been developed between the maximum five-minute average and any other available averaging time, the relationship may be used to calculate maximum five minute average values from such other averaging time data.

c. Location of Measurements

Measurements of air pollutants may be made at any place where air pollution could exist.

___05E Secondary Ambient Air Quality Standards for Fluorides.

1. Ambient air quality standards for fluorides at the more adverse and serious level shall be those concentrations in the ambient air which result in the following values being exceeded:

a. Vegetable Crops:

Vegetable tissue intended for human use, trimmed as normally marketed or consumed shall not exceed 20 micrograms F per gram dry tissue in unwashed samples.

b. Field Crops:

(1) Middle aged fully expanded leaves of corn or sorghum intended for grain shall not, at time of tasseling, exceed 35 micrograms F per gram dry tissue in washed samples.

(2) Any field crops intended for market as hay silage or forage shall not exceed 40 micrograms F per gram dry tissue in unwashed samples as marketed.

(3) Other field crops at any stage of growth shall not exceed 50 micrograms F per gram dry tissue in washed samples.

c. Cattle Forage:

(1) Running averages of 12 monthly samples of forage or hay or silage grown in the area as feed shall not exceed 40 micrograms F per gram tissue in unwashed samples.

(2) The average of any two consecutive months samples of forage or hay or silage grown in the area as feed shall not exceed 60 micrograms F per gram dry tissue in unwashed samples.

(3) No monthly sample of forage or hay or silage grown in the area as feed shall exceed 80 micrograms F per gram dry tissue in unwashed samples.

d. Fruit trees, Berries and other Commercial Crops

Fully expanded functional leaves shall not exceed 50 micrograms F per gram dry tissue in washed samples.

e. Deciduous Trees and Shrubs

Fully expanded functional leaves shall not exceed 100 micrograms F per gram dry tissue in washed samples.

f. Conifers and Evergreen Trees or Shrubs

Fully expanded leaves or needles of the current year shall not exceed 50 micrograms F per gram dry tissue in washed samples. Leaves and needles of prior seasons shall not exceed 75 micrograms F per gram dry tissue in washed samples.

g. Grasses and Herbs

Grasses and herbs not subject to browsing, grazing or harvest for use in feeds or food shall not exceed 150 micrograms F per gram dry tissue in washed samples.

h. Ornamental Plantings

Ornamental plants, except trees, shrubs and turf where ___05E1d, ___05E1e, ___05E1f, and ___05E1g apply shall not exceed 40 micrograms F per gram dry tissue in fully expanded leaves, in washed samples, at any period during the growing season.

i. Other Values

When vegetation sampling is deemed by the Department to be not practicable, unsatisfactory conditions may be assumed to exist by the Department when either:

(1) Static limed filter paper samples of 28 to 32 days exposure exceed 5 micrograms F per 100 square centimeters per day or,

(2) Gaseous fluorides exceed 2 micrograms F per cubic meter of air in any 24-hour sample and any 72-hour average exceeds 0.4 micrograms F per cubic meter of air.

2. Air Pollution Control Measures to be Required. When and where concentrations of fluoride cause any of the values set forth in subsection ___05E1 to be exceeded, the application of all necessary ways and means shall be required for reducing such concentrations. The ways and means to be required and the time schedule for their implementation shall be based on the premise that fluoride concentrations are progressively to be reduced in the shortest possible time to levels that will not cause the values in subsection ___05E2 to be exceeded.

3. Measurement of Fluoride. Methods for measuring the fluoride content of any plant tissue shall be suitable modification of the Willard and Winter method (ref. Willard, H. H. and Winter, O. B. Volumetric Method for Determination of Fluoride. Ind. Eng. Chem. Anal. Ed. 5: 7-10, 1933) such as:

> Weinstein, L., R. H. Mandl, D. C. McCune, J. S. Jacobson, and A. E. Hitchcock. Semi-Automated Analysis of Fluoride in Biological Materials. J. Air Poll. Control Assoc. 15: 222-5, 1965.

Results are expressed on a dry weight basis in washed and unwashed samples as noted. Micrograms F per gram dry tissue means micrograms of fluoride as the ion, per gram of dry material. Methods of measuring gaseous air samples shall be the carbonate tube method or the dual tape method by Weinstein et al ref:

> Weinstein, L. H. and R. H. Mandl. The Separation and Collection of Gaseous and Particulate Fluoride. VDI Berichte. 164, 1970.

Other methods may be used if they have been demonstrated to be equally or more specific, accurate, sensitive and reproducible and if first approved by the Department.

(2.0) ___06 CONTROL AND PROHIBITION OF INSTALLATIONS AND OPERATIONS

___06A General. No installation or premise shall be operated or maintained in such a manner that a nuisance or air pollution is created. Nothing in this regulation shall in any manner be construed as authorizing or permitting the creation of or maintenance of a nuisance or air pollution.

___06B Circumvention. No person shall install or use any article, machine, equipment or other contrivance, the use of which, without resulting in a reduction in the total weight of emissions, conceals or dilutes an emission which would otherwise constitute a violation of any applicable air pollution control regulations.

___06C Prohibition of Certain Incinerators.

1. No person shall cause, suffer, allow or permit the construction of any incinerator on or after the effective date of this subsection ___06C1(11) if the use of such incinerator will be prohibited under provisions of subsection ___06C2.

2. No person shall cause, suffer, allow or permit the use of any flue-fed or chute-fed single chamber incinerator on or after July 1, 1972. No person shall cause, suffer, allow or permit the use of any other incinerator on or after July 1, 1973 except as provided below:

   a. Incinerators that have a burning capacity greater than five tons per hour and which are used to burn at least 20 tons of refuse per day.

   b. Crematory and pathological incinerators that are used to burn type 4 wastes (according to I.I.A. Standards) or medical wastes.

   c. Specific by-product incinerators that are used to burn type 5 or 6 wastes (according to I.I.A. Standards) and which have a burning rate of at least one ton per hour and are used to burn at least two tons per day of waste.

3. Householders are permitted to burn ordinary household trash (I.I.A. waste types 0 and 1 only) originating on the premises, in incinerators, in those areas where public collection of refuse is not provided.

4. Any incinerator, the use of which is prohibited under provisions of this section, shall be made inoperable in a manner approved by the Control Officer or the Department.

___06D Refuse Burning Prohibited in Certain Installations. No person shall burn refuse in any installation or equipment not specifically designed, constructed or modified for that purpose.

___06E Prohibition of Certain New Fuel Burning Installations.

1. No person shall construct a new fuel burning installation designed for use of residual fuel oil in which any individual furnace has a heat input rate less than five million BTU per hour nor shall residual fuel oil be used at any time in any furnace having a heat input rate of less than five million BTU per hour if the furnace was built on or after the effective date of these regulations. (12)

2. No person shall construct a new fuel burning installation designed for use of solid fuels in which any individual furnace has a heat input rate of less than 250 million BTU per hour nor shall solid fuels be used at any time in any furnace having a heat input rate of less than 250 million BTU per hour if the furnace was built on or after the effective date of these regulations. (13)

___06F Control of Sources of Fluoride Emissions.

1. No person shall cause, suffer, allow or permit the discharge into the atmosphere of fluorides from any installation in such combinations and in such amounts that any provision of the ambient air quality standards for fluorides set forth in ___05E is contravened.

2. Surveillance

a. Existing Installation Surveillance Program

A person responsible for an installation discharging fluorides shall conduct a continuing environmental surveillance program, in a manner approved by the Department, to determine whether ambient air quality standards for fluorides are violated.

b. New Installation Surveillance Program

No "Permit to Construct" will be issued for any new potential source of fluoride emissions until the applicant has conducted a survey of background levels of fluoride in the environment in a manner and to an extent approved by the Department. Applicants for a "Permit to Operate" shall be subject to the requirements of ___06F2a.

c. Reporting

All data collected by the environmental programs and surveys of fluorides, required by this subsection, shall be maintained and made available to the Department in a manner and on a schedule approved by the Department. Such data shall be available to the public.

d. Modification of Surveillance Programs

Any modification to the environmental programs and surveys required under this subsection, must be approved by the Department. Such modification may be initiated by the Department.

(2.0) ___07 TRANSITION FROM PREVIOUS REGULATIONS

___07A Previous Compliance. Any individual installation which, between the dates of May 28, 1968 and the date these present amendments to regulation 10.03.39 were adopted, (14) was purchased as new equipment or was extensively altered, at substantial cost, for the sole purpose of reducing emissions in order to comply with subsections ___0101A and ___0101B; ___0201; ___0202; ___0203; ___0204; ___0301; or ___0302 of regulation 43P05 as it became effective on May 28, 1968 is exempt from compliance with section or subsections ___02; ___03B; ___03C; ___03E1; ___032; ___04A1, or ___04B respectively until May 28, 1973, so long as the installation continues to operate in compliance with said regulation 43P05 of May 28, 1968.

___07B Previous Plans for Compliance. All plans for compliance with regulation 43P05 as it became effective on May 28, 1968 which have been approved by the Board or the Secretary shall be evaluated by the Department. Any part of such plans which the Department determines relate to an installation which is subject to more restrictive emission control requirements under terms of this amended regulation 10.03.39, as compared to the respective requirements of regulation 43P05 as it became effective on May 28, 1968, is hereby declared null and void unless actual construction or fabrication work had been started or equipment, materials or fuels had been ordered, purchased or delivered in preparation for implementing emissions reduction work on the installation involved prior to the date these present amendments to regulation 43P05 were adopted. An amended plan for compliance may be submitted to the Department.

___07C Previous Regulations Remain in Effect in Certain Cases. Provisions of regulation 43P05 as adopted on May 28, 1968 shall remain in effect with regard to installations and matters dealt with in these amendments until the effective dates provided for these amendments are applicable to the respective installations or matters.

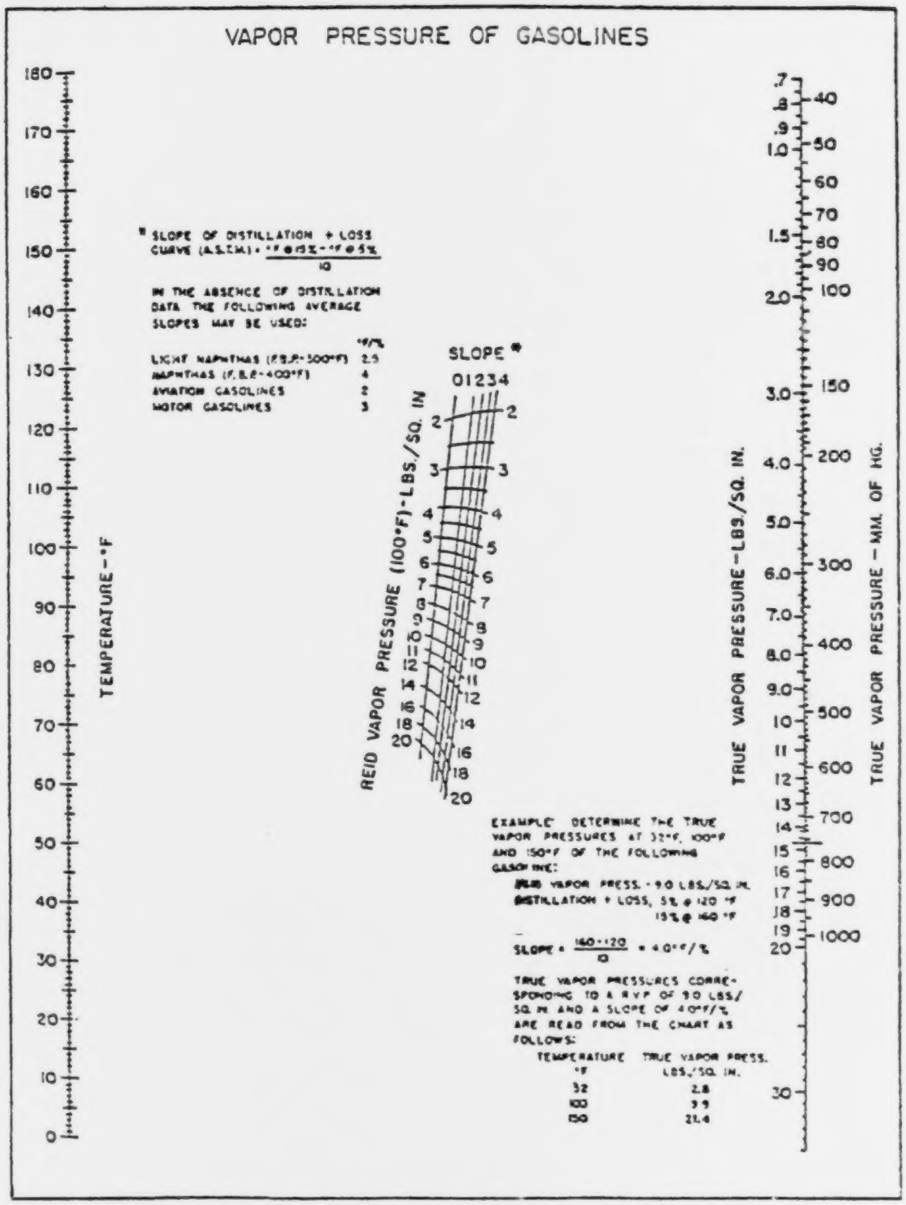
TABLE I [(a)]
Emission Standards and Dust Collector Performance Standards for Fuel Burning Installations

	Max. rated heat input in million BTU per hour per furnace	Effective date of Standard	Maximum allowable emission of particulate matter gr/SCFD	Maximum allowable emission; Shell-Bacharach smoke spot test number (b)	Required collection efficiency of dust collector
Residual oil burning; all installations up to 200 million BTU per hour heat input	Less than 10	Jan. 4, 1971	No requirement	6	No requirement
	Less than 10	Oct. 1, 1973	0.03	4	50% or more
	10 - 50	Jan. 4, 1971	No requirement	6	No requirement
	10 - 50	Oct. 1, 1973	0.025	4	60% or more
	51 - 200	Jan. 4, 1971	No requirement	6	No requirement
	51 - 200	Oct. 1, 1973	0.02	4	70% or more
Residual oil burning; existing and modified installations	Greater than 200	Jan. 4, 1971	0.02	4	70% or more
Residual oil burning; new fuel burning equipment	Greater than 200	Jan. 4, 1971	0.01	4	80% or more
Distillate oil burning; all installations	All sizes	Oct. 1, 1971	No requirement	3	No requirement
		Oct. 1, 1971	NO requirement	2	No requirement
Solid fuel burning; all installations	200 or less	Oct. 1, 1971	0.05	No requirement	90% or more
	Greater than 200	Oct. 1, 1971	0.03	No requirement	99% or more

(a) Relates to section ___03B

(b) The method used for measurement of both residual and distillate oil burning equipment shall be in accordance with method D-2156 published by the American Society for Testing and Materials.

Figure 1



VAPOR PRESSURE OF GASOLINES

* SLOPE OF DISTILLATION + LOSS CURVE (A.S.T.M.) = $\frac{°F @ 15\% - °F @ 5\%}{10}$

IN THE ABSENCE OF DISTILLATION DATA THE FOLLOWING AVERAGE SLOPES MAY BE USED:

	°F/%
LIGHT NAPHTHAS (F.B.P.-300°F)	2.5
NAPHTHAS (F.B.P.-400°F)	4
AVIATION GASOLINES	2
MOTOR GASOLINES	3

EXAMPLE: DETERMINE THE TRUE VAPOR PRESSURES AT 32°F, 100°F AND 150°F OF THE FOLLOWING GASOLINE:

REID VAPOR PRESS. = 9.0 LBS./SQ. IN.
DISTILLATION + LOSS, 5% @ 120 °F
15% @ 160 °F

SLOPE = $\frac{160-120}{10}$ = 4.0°F/%

TRUE VAPOR PRESSURES CORRESPONDING TO A R.V.P. OF 9.0 LBS/SQ. IN. AND A SLOPE OF 4.0°F/% ARE READ FROM THE CHART AS FOLLOWS:

TEMPERATURE °F	TRUE VAPOR PRESS. LBS./SQ. IN.
32	2.8
100	9.9
150	21.4

Reference: Coordinating Research Council (CRC) Handbook, PP. 244-254 (1946)

Table 2

MAXIMUM ALLOWABLE WEIGHT OF PARTICULATE MATTER DISCHARGED PER HOUR

Process Wt/hr (lbs)	Maximum Weight Disch/hr (lbs)	Process Wt/hr (lbs)	Maximum Weight Disch/hr (lbs)	Process Wt/hr (lbs)	Maximum Weight Disch/hr (lbs)
50 or less	0.24	1900	4.03	4700	6.45
100	0.46	2000	4.14	4800	6.52
150	0.66	2100	4.24	4900	6.60
200	0.85	2200	4.34	5000	6.67
250	1.03	2300	4.44	5500	7.03
300	1.20	2400	4.55	6000	7.37
350	1.35	2500	4.64	6500	7.71
400	1.50	2600	4.74	7000	8.05
450	1.63	2700	4.84	7500	8.39
500	1.77	2800	4.92	8000	8.71
550	1.89	2900	5.02	8500	9.03
600	2.01	3000	5.10	9000	9.36
650	2.12	3100	5.18	9500	9.67
700	2.24	3200	5.27	10000	10.00
750	2.34	3300	5.36	11000	10.63
800	2.43	3400	5.44	12000	11.28
850	2.53	3500	5.52	13000	11.89
900	2.62	3600	5.61	14000	12.50
950	2.72	3700	5.69	15000	13.13
1000	2.80	3800	5.77	16000	13.74
1100	2.97	3900	5.85	17000	14.36
1200	3.12	4000	5.93	18000	14.97
1300	3.26	4100	6.01	19000	15.58
1400	3.40	4200	6.08	20000	16.19
1500	3.54	4300	6.15	30000	22.22
1600	3.66	4400	6.22	40000	28.30
1700	3.79	4500	6.30	50000	34.30
1800	3.91	4600	6.37	60000 or more	40.00

Relates to ___03E

Table 1

Ambient Air Quality Standards

Pollutant	Frequency	More Adverse Range				Serious Level		Conversion Factor
	Times values may be exceeded per unit time	ug/m^3		ppm		ug/m^3	ppm	
		Lower Limit	Upper Limit	Lower Limit	Upper Limit			
1. Sulfur oxides (expressed as sulfur dioxide concentrations)								
Annual Arithmetic Average	Values not to be exceeded	39	79	0.015	0.03	79	0.03	$\frac{ug/m^3}{2620}$ = ppm
24 Hour Average	Once per year	131	262	0.05	0.10	262	0.10	
One Hour Average	Once per month	262	525	0.10	0.20	525	0.20	
5-Minute Average	Twice per week	655	1310	0.25	0.50	1310	0.50	
2. Particulate Matter a. Suspended Particulate								
Annual Arithmetic Average	Values not to be exceeded	65	75	-	-	75	-	
24 Hour Average	Once per year	140	160	-	-	160	-	

Table 1 cont'd

Pollutant	Frequency Times values may be exceeded per unit time	More Adverse Range		Serious Level		Conversion Factor
		Lower Limit	Upper Limit			
b. Dustfall		mg/cm^2/month		mg/cm^2/month		
Annual Arithmetic[1] Average	Values not to be exceeded	0.35	0.50	0.50		$\frac{mg/cm^2}{.035} = ton/mi^2$
Monthly Maximum	Values not to be exceeded	0.70	1.00	1.0		
3. Carbon Monoxide 8-Hour Arithmetic Average[2]	Once per year	No standard		mg/m^3 10	ppm 9	$mg/m^3 \times 0.873 = ppm$
Hourly Average	Once per year	No standard		40	35	
4. Non-methane Hydrocarbons[3] 3-Hour Average[4]	Once per year	No standard		ug/m^3 160	ppm Carbon 0.24	$\frac{ug/m^3}{655} = ppm$
5. Photochemical Oxidants				ug/m^3	ppm Ozone	
Maximum Hourly Average	Once per year	No standard		160	0.08	$\frac{ug/m^3}{1960} = ppm$
6. Nitrogen Dioxide				ug/m^3	ppm	
Annual Arithmetic Average	Values not to be exceeded	No standard		100	0.05	$\frac{ug/m^3}{1882} = ppm$

References

1. Annual averages shall be based on at least nine monthly samples.

2. Applies in areas representing generalized atmospheric levels; 20 ppm applies in any other place where members of the public congregate for extended periods of time.

3. The standards set forth in this regulation for hydrocarbons are not based upon the direct adverse effects of hydrocarbons but upon an empirical relationship, based upon ambient air quality measurements, between morning hydrocarbon concentrations and oxidant concentrations occurring later the same day. The hydrocarbon standard is designed primarily to achieve the standard for photochemical oxidants. In view of the lack of an exact quantitative relationship, the uncertainties in existing measurement techniques and a lack of full identification of the photochemically reactive species of hydrocarbons occurring in the ambient air in the region, these levels should be considered as tentative pending further scientific developments.

4. Three hour period: 6 a.m. to 9 a.m. Eastern Standard Time.

Maryland State Department of Health and Mental Hygiene
301 West Preston Street
Baltimore, Maryland 21201

10.03.40 Regulations Governing the Control of Air Pollution in Area V*

Pursuant to the authority conferred upon the Secretary of Health and Mental Hygiene by Article 43, Annotated Code of Maryland, 1957 Edition, and Supplement, the following regulations governing the control of air pollution in Area V are hereby established as requirements of the Department of Health and Mental Hygiene.

(51.13) ___01 CONTROL AND PROHIBITION OF OPEN FIRES

___01A General. No person shall cause, suffer, allow or permit an open fire except as provided in subsection ___01B, ___01C and ___01D.

___01B Control Officer May Authorize Certain Open Fires.

1. Subject to review by the Department, the Control Officer may, upon receipt of an application made on forms provided by the Department or local fire control agency, issue or approve a permit in writing allowing an open fire provided all of the following conditions are met:

    a. The Control Officer is satisfied that there is no practical alternate method to dispose of the material to be burned or to conduct the desired activities.

    b. No hazardous condition or air pollution or nuisance will be created.

    c. Fire control laws or regulations of other governmental agencies will not be violated.

    d. No materials which produce dense smoke when burned, including but not limited to tires and roofing material, will be burned.

    e. The material to be burned shall have originated on the premises on which it is to be burned.

2. The Control Officer may impose other conditions to minimize creation of smoke, to prevent nuisances and air pollution, and to protect the health, safety, comfort and property of any persons.

___01C Public Officer May Authorize Certain Fires.

Public officers, in the performance of their official duties, may set an open fire or give permission for an open fire, with concurrence of the Control Officer, provided all reasonable means are employed to minimize smoke if the fire is necessary for one or more of the following reasons or purposes:

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* Editor's note: Southern Maryland Area comprised of Calvert, Charles and St. Mary's Counties.

1. For the prevention of a fire hazard that cannot be abated by other means.

2. For the instruction of public fire fighters or industrial employees under supervision of the appropriate fire control official.

3. For the protection of public health or safety when other means for disposing of hazardous materials are not available.

___01D Allowed Open Fires. Open fires otherwise in conformance with other governmental fire control ordinances, provided no nuisance or air pollution is created, are allowed without permission as follows:

1. In those areas where no provision is made for public collection of leaves, the open burning of leaves originating on the premises by householders is permitted. On and after July 1, 1973, no leaves shall be burned at locations closer than 200 feet from any neighboring habitable dwelling or place where people work or congregate.

2. In those areas where no provision is made for public collection of refuse, burning of ordinary household trash (I.I.A. Waste types 0 and 1 only) originating on the premises, excluding commercial establishments, by householders is permitted provided that:

    a. Materials are not burned which create dense smoke (emissions of an opacity or darkness greater than No. 2 on the Ringelmann Smoke Chart);

    b. On and after July 1, 1973, no refuse shall be burned at locations closer than 200 feet from any neighboring habitable dwelling or place where people work or congregate.

3. Cooking of Food.

4. Fires set in the course of agricultural operations in growing crops or raising fowl or animals or in accepted forestry practice. In no case shall this provision be construed as allowing the burning of ordinary household or barnyard trash in areas where provision is made for public collection of refuse.

5. Recreational purposes, such as campfires.

6. Oil or gas fired salamanders or similar devices designated specifically for space heating or warming of outdoor workers, etc., provided no visible emissions are created.

7. Warming of fires for outdoor workers, providing smoke emissions

are not darker than No. 2 on the Ringelmann Smoke Chart, and the fires are located no closer than 200 feet from any neighboring habitable building.

(50.1.2) ___02 CONTROL AND PROHIBITION OF VISIBLE EMISSIONS

___02A For the purpose of these regulations:

1. "Existing installation" shall mean those erected prior to the effective date of these regulations. (Date will be noted by reference number on specific regulations.)

2. "Modified installation" shall mean those altered, changed or added to on or after the effective date of these regulations. (Date will be noted by reference number on specific regulations.)

3. "New Plant" shall mean any installation for which the major proportion of the fuel burning, incineration, processing or manufacturing equipment in the installation is erected on or after the effective date of these regulations. (Date will be noted by reference number on specific regulations.) This definition is not intended to apply to a "modified installation" where new control equipment is added to an existing installation. In questionable cases, the determination of new plant shall be made by the Department.

___02B Visible Emissions from New Plants.[1] No person shall cause, suffer, allow or permit the discharge of emissions from any new plant or building other than water in an uncombined form, which are visible to human observers.

___02C Visible Emissions from Existing and Modified Installations.[2]

1. Existing and Modified Bituminous Concrete Manufacturing Plants. No person shall cause, suffer, allow or permit the discharge of emissions from any existing or modified bituminous concrete manufacturing installation other than water in an uncombined form, which are visible to human observers.

2. Other Existing and Modified Installations. No person shall cause suffer, allow or permit emissions from any other existing installation, modified installation or building that are darker in shade or appearance than that designated as No. 1 on the Ringelmann Smoke Chart; or of such opacity as to obscure an observer's view to a degree greater than does smoke designated as No. 1 on the Ringelmann Smoke Chart.

___02D Exceptions.

1. Subsections ___02B and ___02C shall not apply to emissions during the building of a new fire, cleaning of fires, soot blowing, start-up,

process modification or adjustment, or occasional cleaning of control equipment, the shade or appearance of which is not darker than No. 2 on the Ringelmann Smoke Chart for a period or periods aggregating no more than four minutes in any sixty minutes.

2. Any person who believes that meeting the requirements of subsection ___02B is not practical in a particular instance may request an exception to the requirements of subsection ___02B. Such a request shall be submitted to the Department in writing and include evidence to show why compliance is not practical. Based on evidence presented and other information, the Department may recommend to the Secretary that an exception be granted for a period not exceeding one year at a time under such stated terms and conditions as the Secretary may determine, provided the appellant has shown that:

   a. There presently are no practical ways or means available to enable compliance with subsection___02B and;

   b. When possible, he is participating vigorously and substantially in activities directed toward finding or developing ways and means which would make it practical to reduce or eliminate visible emissions from the kind of plant which is at issue.

3. Subsection ___02B shall not apply to emissions of the following:

   a. From the burning of wood in fireplaces on premises used for residential or recreational purposes;

   b. From open fires (except salamanders) permitted under provisions of subsections ___01B, ___01C and ___01D of this regulation.

4. The Control Officer may grant exceptions to ___02C above under the following conditions:

   a. When the application of ___02C to a residential building housing two or less families creates undue economic hardship on individuals residing therein or,

   b. When the installation's primary way of transferring heat is by the radiant method rather than a piped fluid system such as forced hot air, hydronic, or steam. Installations in this category would include stoves, room heaters, floor or wall mounted circulating heaters, fireplaces or similar devices.

(50.1) ___03 CONTROL AND PROHIBITION OF PARTICULATE MATTER EMISSIONS

(50.1) ___03A General Conditions. All calculations of particulate matter emissions shall be made in terms of grains per standard cubic foot dry exhaust gas (gr/SCFD).

1. For fuel burning plants and installations calculations shall be corrected to 50% excess air.

2. For incineration plants and installations calculations shall be corrected to 12% carbon dioxide and as if no auxiliary fuel has been used, except for pathological waste units which shall be corrected to 3.5% carbon dioxide.

(51.5) ___03B Control of Particulate Matter from Fuel Burning Plants and Installations.

1. General Conditions for Fuel Burning Plants and Installations.

   a. When two or more fuel burning plants or installations are connected to a single stack, the combined heat input of all units connected to the stack shall be used to determine the allowable emissions from the stack.

   b. When a single fuel burning plant or installation is connected to two or more stacks, the allowable emissions from all the stacks combined shall not exceed that allowable for the same unit if connected to a single stack.

2. New Fuel Burning Plants.[3]

   a. No person shall cause, suffer, allow or permit particulate matter caused by the combustion of fuel in any new fuel burning plant to be discharged into the atmosphere in excess of the amounts shown in Table 1.

   b. Dust Collection Devices Required on New Fuel Burning Plants.

      (1) Effective October 1, 1972, no person shall cause, suffer, allow or permit the combustion of residual fuel oil in any new fuel burning plant with a fuel burning capacity of less than 200 x 10^6 BTU per hour unless such plant is equipped with a dust collector, the collection efficiency of which meets the requirements shown in Table 1.

      (2) Effective immediately, no person shall cause, suffer, allow or permit the combustion of solid fuel in any new fuel burning plant unless such plant is equipped with a dust collector with 99% or more efficiency or the combustion of fuel oil in an oil burning installation with a heat input greater than 200 x 10^6 BTU/hour, unless equipped with a dust collector with an efficiency of 80% or more.

3. Existing and Modified Fuel Burning Installations.[4] No person shall cause, suffer, allow or permit particulate matter caused by the

combustion of fuel in any existing or modified fuel burning installation to be discharged from any stack or chimney into the atmosphere in excess of the hourly rate set forth in the following table.

Heat Input in Million BTU per hour	Maximum Allowable Discharge of Particulate Matter in Pounds per million BTU From Existing and Modified Fuel Burning Installations
Up to and including 10	0.60
> 10 to 100	0.35
>100 to 1000	0.20
Greater than 1000	0.12

For a heat input between any two consecutive heat inputs stated in the preceding table, maximum allowable discharge of particulate matter is shown for existing and modified fuel burning installations on Figure 1. For the purposes hereof, heat input shall be calculated as the aggregate heat content of all fuels whose products of combustion pass through the stack or chimney.

4. Exceptions, the Control Officer may grant exceptions to ___03B3 above under the following conditions:

   (1) When the application of subsection ___03B3 to a residential building housing two or less families creates undue economic hardship on individuals residing therein or,

   (2) When the installation's primary way of transferring heat is by the radiant method rather than a piped fluid system such as forced hot air, hydronic, or steam. Plants in this category would include stoves, room heaters, floor or wall mounted circulating heaters, fireplaces or similar devices.

(51.9) ___03C Particulate Matter from Incineration Plants and Installations.

1. New Incineration Plants.[5]

   a. No person shall cause, suffer, allow or permit to be discharged into the atmosphere particulate matter to exceed 0.10 gr/SCFD from any new incineration plant that has a burning capacity less than 1 ton of refuse per hour and is used to burn less than 5 tons of refuse per day.

   b. No person shall cause, suffer, allow or permit to be discharged into the atmosphere particulate matter to exceed 0.03 gr/SCFD from any new incineration plant that has a burning capacity equal to or greater than 1 ton of refuse per hour or is used to burn 5 tons or more of refuse per day.

2. Existing and Modified Incineration Installations.[6] No person shall

cause, suffer, allow or permit to be discharged into the outdoor atmosphere from any existing or modified incinerator the following:

a. From any existing or modified incinerator burning less than 200 pounds of refuse per hour, particulate matter to exceed 0.3 grain per standard cubic foot of dry flue gas.

b. From any existing or modified incinerator burning 200 or more pounds of refuse per hour, particulate matter exceed 0.2 grain per standard cubic foot of dry flue gas.

(51.1) ___03D Particulate Matter from Agricultural Operations.

1. Particulate Matter from Grain Drying Installations.

a. No person shall cause, suffer, allow or permit the operation of any grain drying installation unless equipped in such a manner that all exhaust gases discharged pass through a 50 mesh screen; or the installation is equipped with other equipment or incorporated design features that will accomplish the same of more effective results in reducing the discharge of particulate matter.

b. Exceptions. Mobile type grain drying installations, with an operating capacity of 500 bushels per hour or less, located outside a town, village or city and at a distance greater than 300 yards from a habitable dwelling or place of business, shall be exempt from ___03D1a provided no nuisance or air pollution is created.

2. Control of Orchard Heaters.

General. No person shall cause, suffer, allow or permit to be used any type of orchard heater or other such frost control device which discharges into the atmosphere more than one gram per minute of unconsumed carbonaceous matter.

(50.1.1) ___03E Particulate Matter from Other Plants and Installations.

1. Other New Plant.[7]

a. No person shall cause, suffer, allow or permit to be discharged into the atmosphere from any other new process plant, particulate matter in excess of 0.03 gr/SCFD.

b. The maximum allowable weight of particulate matter discharged per hour from any other new process plant shall not exceed that determined from Table 2. Where the process weight per hour falls between two values in the table, the maximum weight discharged per hour shall be determined by linear interpolation. When the process weight exceeds 60,000 pounds per hour, the maximum allowable weight discharged per hour will be determined by the use of the following equation:

$$E = 55.0\ P^{0.11} - 40$$

Where E = Maximum weight discharged per hour (lbs.)
P = Process weight rate in tons per hour

This limitation shall supersede the requirements of section ___03E1a if it requires a lower emission rate per hour.

2. Other Existing and Modified Process Installations.[8]

   a. Existing and Modified Bituminous Concrete Manufacturing Installations. No person shall cause, suffer, allow or permit to be discharged into the atmosphere from any existing or modified bituminous concrete manufacturing installation particulate matter in excess of 0.03 gr/SCFD.

   b. Other Existing and Modified Installations.

      (1) The maximum allowable weight of particulate matter discharged per hour from any other existing or modified process installation shall not exceed that determined from Table 2. Where the process weight per hour falls between two values in the table, the maximum weight discharged per hour shall be determined by linear interpolation. When the process weight exceeds 60,000 pounds per hour, the maximum allowable weight discharged per hour will be determined by use of the following equation:

$$E = 55.0\ P^{0.11} - 40$$

Where E = Maximum weight discharged per hour (lbs.)
P = Process weight rate in tons per hour

      (2) For those processes in which the process weight per hour exceeds 60,000 pounds, the maximum allowable weight of particulate matter discharged per hour may exceed that calculated by the above equation providing that the concentration of particulate matter in the gases discharged to the atmosphere is less than 0.05 gr/SCFD.

(51.3) ___03F Particulate Matter from Materials Handling and Construction and Other Acts.

1. No person shall cause, suffer, allow or permit any material to be handled, transported, or stored; or a building, its appurtenances, or a road to be used, constructed, altered, repaired or demolished without taking reasonable precautions to prevent particulate matter from becoming airborne. Such reasonable precautions shall include, when appropriate as determined by the Control Officer, but not be limited to the following:

a. Use of water or chemicals for control of dust in the demolition of existing buildings or structures, construction operations, the grading of roads or the clearing of land;

b. Application of asphalt, oil, water or suitable chemicals on dirt roads, materials stockpiles, and other surfaces which can create airborne dusts;

c. Installation and use of hoods, fans and dust collectors to enclose and vent the handling of dusty materials. Adequate containment methods shall be employed during sandblasting of buildings or other similar operations;

d. Covering, at all times when in motion, open-bodied vehicles transporting materials likely to create air pollution. Alternate means may be employed to achieve the same results as would covering;

e. The paving of roadways and their maintenance in a clean condition;

f. The prompt removal from paved streets of earth or other material which has been transported thereto by trucks or earth moving equipment or erosion by water.

2. No person shall cause, suffer, allow or permit visible emissions beyond the lot line of the property on which the emissions originate.

___04 CONTROL AND PROHIBITION OF GAS, VAPOR AND ODOR EMISSIONS

(2.0) ___04A General.

1. Odors. No person shall cause, suffer, allow or permit the discharge into the atmosphere of gases, vapors, or odors beyond the property line in such a manner that a nuisance or air pollution is created.

2. General Conditions. All calculations of emissions governed by ___04C shall be adjusted to standard conditions.

(51.6) ___04B Sulfur Oxides from the Burning of Fuel. No person shall burn, sell or make available for sale any fuel unless the following conditions are met:

1. The combustion of all solid fuels on a premise where the sum total maximum rated heat input of all fuel burning equipment located on the premise is 100 million BTU per hour or greater shall not result in a total emission of oxides of sulfur in excess of 3.5 pounds per million BTU actual heat input per hour.

2. On and after July 1, 1975, residual fuel oil, 2.0 percent.

3. Distillate fuel oils, 0.3 percent.

4. Process gas used as a fuel, 0.3 percent.

(50.2) ___04C Sulfur Compounds from Other than Fuel Burning Installations.

1. No person shall cause, suffer, allow or permit the discharge into the atmosphere from installations other than fuel burning installations of gases containing more than 2,000 parts per million by volume of sulfur dioxide. Any such installation constructed after the effective date of these regulations shall not discharge into the atmosphere gases containing more than 500 parts per million by volume of sulfur dioxide.

2. No person shall cause, suffer, allow or permit the discharge into the atmosphere from installations other than fuel burning installations, of gases containing sulfuric acid, sulfur trioxide, or any combination thereof, greater than 70 milligrams per cubic meter reported as sulfuric acid. Any such installation constructed after the effective date of these regulations[10] shall not discharge into the atmosphere gases containing sulfuric acid, sulfur trioxide, or any combination thereof, greater than 35 milligrams per cubic meter reported as sulfuric acid.

(2.0) ___04D Exceptions.

1. Fuels containing sulfur in excess of the amounts specified in ___04B may be burned, sold, or made available for sale provided control equipment to desulfurize stack gases has been installed or other methods of devices are employed by the user or purchaser such that the discharge of sulfur dioxide to the atmosphere does not exceed 0.5 pounds per million BTU of heat intput to the associated installation in which such fuel is burned.

2. The Secretary may authorize the operation of a scavenger or recovery plant to reclaim sulfur compounds which would otherwise be discharged into the air provided the operation of such a scavenger or recovery plant would reduce total discharge of sulfur compounds at least 95% with said plant in operation compared to discharge when the aforementioned plant is not operating. Such authorization may result in discharge of sulfur compounds whose concentration exceeds those permitted by subsections 1 and 2 of ___04C. This subsection shall not apply to sulfuric acid manufacturing operations.

(9.0) ___04E Request for Analysis. Any person offering to sell or deliver fuel or any person responsible for equipment in which fuel is burned shall, upon request, submit to the Department or the Control Officer such analyses of the fuel as may be required to determine compliance with this section.

(50.6) ___04F Control of Odors from the Reduction of Offal and Vegetable Oil.

1. No person shall cause, suffer, allow or permit the use of an installation primarily engaged in the reduction of offal or vegetable oil unless all gases, vapors and gas-entrained matter from said installation are:

   a. First cooled to a temperature of not greater than 160° F and then

   b. The non-condensible fraction is incinerated at a temperature of not less than 1400° F for a period of not less than 0.4 seconds.

   c. Alternate methods may be used if determined by the Department to be equally or more effective for the purpose of controlling air pollution.

2. Any person processing or incinerating gases, vapors or gas-entrained matter as required by subsection ___04F1 shall install, operate and maintain in good working order and calibration, continuous recording devices for indicating temperature, or pressure or other operating conditions. Such devices shall be approved by the Department and all data collected shall be made available to the Department or the Control Officer for inspection or copying upon request of the Department. Such data shall be kept on file by responsible persons for at least 60 days.

3. No person shall cause, suffer, allow or permit any offal or vegetable oil to be handled, transported or stored or to undertake the preparation of any offal or vegetable oil without taking reasonable precautions to prevent odors from being discharged. Such reasonable precautions, when approved by the Department, shall include but not be limited to the following:

   a. Storage of all offal or vegetable oil prior to or in the process of preparation in properly enclosed and vented equipment or areas, together with the use of effective devices and/or methods to prevent the discharge of odors or odor bearing gases.

   b. Use of covered vehicles of watertight construction for the handling and transporting of offal or vegetable oil.

   c. Use of hoods and fans to enclose and vent the storage, handling, preparation and conveying of any odorous materials together with effective devices and/or methods to prevent emission of odors or odor bearing gases.

4. Whenever the emissions from an installation primarily engaged in the reduction of offal or vegetable oil create a nuisance or air pollution, beyond the property line, the Department may require that

the building in which such installation is located be tightly closed and vented so that all emissions are treated by incineration or by other methods if determined by the Department to be equally or more effective for the purpose of controlling emissions.

5. The requirements of this subsection ___04F shall not apply to any installation engaged exclusively in the processing of food for human consumption.

(51.7) ___04G Nitrogen Oxides from New Fuel Burning Equipment.[11]

1. No person shall cause, suffer, allow or permit the discharge of nitrogen oxides into the atmosphere, from any new fuel burning equipment having a heat input rating of 250 million British Thermal Units (BTU) per hour, or more, in excess of the following rates:

   a. 0.20 pounds per million BTU heat input, maximum two hour average, expressed as NO_2 when gaseous fuel is burned.

   b. 0.30 pounds per million BTU heat input, maximum two hour average, expressed as NO_2 when liquid fuel is burned.

   c. 0.50 pounds per million BTU heat input, maximum two hour average, expressed as NO_2 when solid fuel is burned.

(51.10) ___04H Nitrogen Oxides from Nitric Acid Plants.

1. No person shall cause, suffer, allow or permit the discharge into the atmosphere from any existing nitric acid plant,[12] nitrogen oxides in excess of 5.5 pounds per ton of acid (100 percent basis) produced.

2. No person shall cause, suffer, allow or permit the discharge into the atmosphere from any new nitric acid plant,[13] nitrogen oxides in excess of 3.0 pounds per ton of acid (100 percent basis) produced.

(4.0) ___05 AMBIENT AIR QUALITY STANDARDS

___05A Definitions. For purposes of the ambient air quality standards in this section ___05 only, the following definitions shall apply.

1. Sulfur Oxides

Sulfur oxides include sulfur dioxide, sulfur trioxide, their acids, and the salts of their acids. For purposes of these ambient air quality standards, measurements of sulfur dioxide, by the method specified herein, shall be taken to indicate the concentration of sulfur oxides.

2. Particulate Matter

Particulate matter includes the substances collected from and/or settling out of the atmosphere by use of the measurement procedures prescribed herein for suspended particulate matter and dustfall, respectively.

3. Non-methane Hydrocarbons

Non-methane hydrocarbons are a class of organic compounds, excluding methane, whose molecules consist primarily of atoms of hydrogen and carbon and exist in the ambient air in the gaseous state. Specifically excluded are hydrocarbons and other organic compounds associated with suspended particles in the atmosphere. For purpose of these air quality standards, non-methane hydrocarbons shall be taken to be the difference between the reported total hydrocarbons and methane values measured by the methods specified herein.

4. Photochemical Oxidants

The term photochemical oxidant is used to describe the oxidizing ability of the ambient air. Oxidants are produced in the ambient air as the result of complex photochemical reactions. Because these reactions depend on sunlight, only those oxidant concentrations occurring between 11 a.m. and 5 p.m. EST are considered to be of photochemical origin.

___05B Precepts.

1. It is known that concentrations of air pollutants above certain levels are harmful to the health of man. However, the threshold level at which adverse effects on man's health begin are not known with precision. It must be presumed that adverse effects over a long time period take place at concentrations lower than those now known to produce adverse effects over short time periods. Therefore, in establishing air quality standards, it is prudent to provide for margins of safety in reaching conclusions based on such data as are available which relate health effects to pollutant levels.

2. An ambient air quality standard which would result in avoidable degradation of air quality is in conflict with applicable State law.

3. The ambient air quality standards set forth herein, represent goals expressed in terms of limits on the duration and concentration of pollutants in the atmosphere which are not to be contravened. The ambient air quality standards shall be achieved through application, under provisions or laws or regulations or otherwise, of ways and means for reducing pollutant concentrations including but not limited to removal of air pollutants from exhaust gas streams, fuel

and process material changes, equipment changes, and land use management.

___05C Primary Ambient Air Quality Standards for All Substances Which May Cause Air Pollution and Control Measures To Be Required.

1. The primary ambient air quality standards for all substances which may cause air pollution shall be those lowest concentrations attainable by application of all reasonably available ways and means for reducing pollutant concentrations in the ambient air. In situations of time and place wherein the lower concentrations of any substance in the "more adverse range" as set forth herein are not exceeded, or when there is no standard for the "more adverse range", the "serious level" is not exceeded, all necessary ways and means shall be required for minimizing increases in concentrations of such substances in the ambient air, to the end that said concentrations shall not be exceeded in the future.

2. No statement, numerical standard, or time limit, contained elsewhere in ambient air quality standards shall be interpreted as mitigating in any way the necessity for and the reasonableness of applying all reasonably available ways and means for reducing pollutant concentrations in the ambient air.

___05D Secondary Ambient Air Quality Standards.

1. General

   Secondary ambient air quality standards are presented in two categories: the more adverse range and the serious level. The concentrations denoting each category for various pollutants are presented in Table 3.

2. Air Pollution Control Measures To Be Required in the More Adverse Range. When ambient air concentrations of any pollutant listed in Table 3 are in the more adverse range, as set forth in Table 3, the application of all necessary ways and means for reducing such concentrations shall be required and the time schedule for their implementation shall be based on the premise that the pollutant concentrations are progressively to be reduced to the lower levels or less as set forth in Table 3, within the shortest reasonable time. Such reasonable time should not exceed seven years or such shorter time as may be specified under provisions of the Federal Clean Air Act.

3. Air Pollution Control Measures To Be Required at the Serious Level. When ambient air concentrations of any pollutant listed in Table 3 exceed the serious level, as set forth in Table 3, the application of all necessary ways and means shall be required for reducing such concentrations. The ways and means required and the time schedule for their implementation shall be based on the premise that the

pollutant concentrations are progressively to be reduced to levels lower than the serious level concentrations set forth in Table 3 in the shortest possible time. If ambient air concentrations exceed the serious levels specified in Table 3 as of the year 1971, such concentrations should be reduced to less than the serious levels by not later than the end of calendar year 1974. If, in the future, ambient air concentrations first exceed the serious level, such shortest time should not exceed three years from the year in which the serious level is first exceeded, or such shorter time, if any, as may be required under provisions of Federal law or regulations. In determining the ways and means to be required for reducing pollutant concentrations, matters of economics and private interests and other factors shall be subordinate considerations to the necessity of achieving the standards, for protection of the public health. Additionally, if standards have been adopted for the more adverse range, measures for reducing concentrations of the pollutant further below the serious level shall be instituted in accordance with provisions of paragraph ___05D2.

4. Measurement of Ambient Air Quality to Compare to the Standards.

   a. The method of measurement for each pollutant listed shall be the method specified in the Federal Register, Vol. 36, No. 84, Part III, April 30, 1971. Other methods may be used if they have been demonstrated to be equally or more specific, accurate, sensitive, and reproducible. Other less specific methods of measurement may be used provided a relationship is developed between results obtained by such method and the method specified and provided that the results are interpreted in terms of equivalence to those that would be expected using the listed methods, or other equally or more specific, accurate, sensitive, reproducible methods. Results shall be expressed as micrograms or milligrams of the pollutant per cubic meter of air, at 25 degrees Centigrade and 760 millimeters of mercury pressure except as specifically noted in Table 3. Such values may be converted to parts per million by volume (ppm) by utilizing the appropriate conversion factor listed in Table 3.

   b. Number and Duration of Measurements

      (1) General. The measurements to be taken to compare to the standards shall be made at the frequency and for the duration as noted in the following appropriate sub-paragraphs.

      (2) Annual arithmetic averages shall be based on results from at least 52 sampling periods representing 24 hour periods, distributed throughout the year so as to adequately reflect the true annual average. The second highest daily average value so obtained shall be used to relate to the standards expressed as maximum exceeded once per year.

(3) Daily averages shall be based on measurements made during more than 50 percent of the time period represented. Daily averages may also be determined on the basis of a compilation of hourly averages determined as described in (6) below.

(4) Eight-hour averages shall be based upon measurements representing at least 55 percent of the designated eight-hour time periods. Eight-hour averages may also be determined on the basis of a compilation of eight hourly averages during designated time periods as described in (6) below.

(5) Three-hour averages shall be based upon measurements representing at least 55 percent of the period. Three-hour averages may also be made on the basis of a compilation of three individual hourly averages determined as described in (6) below.

(6) Hourly averages shall be based on at least seven momentary indications of the actual concentration during the hour or any more nearly complete representation of actual concentrations.

(7) Five-minute averages shall be based on samples representative of the total period. However, after a relationship has been developed between the maximum five-minute average and any other available averaging time, the relationship may be used to calculate maximum five-minute average values from such other averaging time data.

c. Location Measurements

Measurements of air pollutant may be made at any place where air pollution could exist.

___05E Secondary Ambient Air Quality Standards for Fluorides.

1. Ambient air quality standards for fluorides at the more adverse and serious levels shall be those concentrations in the ambient air which result in the following values being exceeded:

a. Vegetable Crops:

Vegetable tissue intended for human use, trimmed as normally marketed or consumed shall not exceed 20 micrograms F per gram dry tissue in unwashed samples.

b. Field Crops:

(1) Middle aged fully expanded leaves of corn or sorghum intended for grain shall not, at time of tasseling, exceed 35 micrograms F per gram dry tissue in washed samples.

(2) Any field crops intended for market as hay, silage or forage shall not exceed 40 micrograms F per gram dry tissue in unwashed samples as marketed.

(3) Other field crops at any stage of growth shall not exceed 50 micrograms F per gram dry tissue in washed samples.

c. Cattle Forage:

(1) Running averages of 12 monthly samples of forage or hay or silage grown in the area as feed shall not exceed 40 micrograms F per fram dry tissue in unwashed samples.

(2) The average of any two consecutive months samples of forage or hay or silage grown in the area as feed shall not exceed 60 micrograms F per gram dry tissue in unwashed samples.

(3) No monthly sample of forage or hay or silage grown in the area as feed shall exceed 80 micrograms F per gram dry tissue in unwashed samples.

d. Fruit Trees, Berries and Other Commercial Crops

Fully expanded functional leaves shall not exceed 50 micrograms F per gram dry tissue in washed samples.

e. Deciduous Trees and Shrubs

Fully expanded functional leaves shall not exceed 100 micrograms F per gram dry tissue in washed samples.

f. Conifers and Evergreen Trees or Shrubs

Fully expanded leaves or needles of the current year shall not exceed 50 micrograms F per gram dry tissue in washed samples. Leaves and needles of prior seasons shall not exceed 75 micrograms F per gram dry tissue in washed samples.

g. Grasses and Herbs

Grasses and herbs not subject to browsing, grazing or harvest for use in feeds or food shall not exceed 150 micrograms F per gram dry tissue in washed samples.

h. Ornamental Plantings

Ornamental plants, except trees, shrubs and turf where ___05E1d, ___05E1d, ___05E1f, and ___05E1g apply, shall not exceed 40 micrograms F per gram dry tissue in fully expanded leaves, in washed samples, at any period during the growing season.

i. Other Values

When vegetation sampling is deemed by the Department to be not practicable, unsatisfactory conditions may be assumed to exist by the Department if either:

(1) Static limed filter paper samples of 28 to 32 day exposure exceed five micrograms F per 100 square centimeters per day or,

(2) Gaseous fluorides exceed two micrograms F per cubic meter of air in any 24 hour sample and any 72 hour average exceeds 0.4 micrograms F per cubic meter of air.

2. Air Pollution Control Measures To Be Required. When and where concentrations of fluoride cause any of the values set forth in ___05E1 to be exceeded, the application of all necessary ways and means shall be required for reducing such concentrations. The ways and means to be required and the time schedule for their implementation shall be based on the premise that fluoride concentrations are progressively to be reduced in the shortest possible time to levels that will not cause the values in subsection ___05E1 to be exceeded.

3. Measurement of Fluoride. Methods for measuring the fluoride content of any plant tissue shall be by suitable modification of the Willard and Winter method (ref. Willard, H. H. and Winter, O. B. Volumetric Method for Determination of Fluoride. Ind. Eng. Chem. Anal. Ed. 5: 7-10, 1933) such as:

   Weinstein, L. H., R. H. Mandl, D. C. McCune, J. S. Jacobson, and A. F. Hitchcock, Semi-Automated Analysis of Fluoride in Biological Materials, J. Air Poll. Control Assoc. 15: 222-5, 1965.

   Results are expressed on a dry weight basis in washed and unwashed samples as noted. Micrograms F per gram dry tissue means micrograms of fluoride as the ion, per gram of dry material. Methods of measuring gaseous air samples shall be by the carbonate tube method or the dual tape method by Weinstein et al ref:

   Weinstein, L. H. and R. H. Mandl. The Separation and Collection of Gaseous and Particulate Fluoride. VDI Berichte. 164, 1970.

   Other methods may be used if they have been demonstrated to be equally or more specific, accurate, sensitive and reproducible and if first approved by the Department.

(2.0) ___06 CONTROL AND PROHIBITION OF INSTALLATIONS AND OPERATIONS

___06A General. No installation or premise shall be operated or maintained in such a manner that a nuisance or air pollution is created. Nothing in this regulation shall in any manner be construed as authorizing or permitting the creation of or maintenance of a nuisance or air pollution.

___06B Circumvention. No person shall install or use any article, machine, equipment or other contrivance, the use of which, without resulting in a reduction in the total weight of emissions, conceals or dilutes an emission which would otherwise constitute a violation of any applicable air pollution control regulation.

___06C Refuse Burning Prohibited in Certain Installations. No person shall burn refuse in any plant, installation or equipment not specifically designed, constructed or modified for that purpose.

___06D Prohibition of Certain New Fuel Burning Plants.[14]

1. No person shall construct a new fuel burning plant designed for use of residual fuel oil in which any individual furnace has a rated heat input of less than five million BTU per hour nor shall residual fuel oil be used at any time in any new fuel burning plant having a rated heat input of less than five million BTU per hour.

2. No person shall construct a new fuel burning plant designed for use of coal in which any individual furnace has a rated heat input of less than 250 million BTU per hour nor shall coal be used at any time in any new fuel burning plant having a rated heat input of less than 250 million BTU per hour.

___06E Control of Sources of Fluoride Emissions

1. No person shall cause, suffer, allow or permit the discharge into the atmosphere of fluorides from any installation in such combinations and in such amounts that any provision of the ambient air quality standards for fluorides set forth in ___05F is contravened.

2. Surveillance

   a. Existing Installation Surveillance Program.

      A person responsible for an installation discharging fluorides shall conduct a continuing environmental surveillance program, in a manner approved by the Department, to determine whether ambient air quality standards for fluorides are violated.

b. New Installation Surveillance Program.

No "Permit to Construct" will be issued for any new potential source of fluoride emissions until the applicant has conducted a survey of background levels of fluoride in the environment in a manner and to an extent approved by the Department. Applicants for a "Permit to Operate" shall be subject to the requirements of ___06E2a.

c. Reporting.

All data collected by the environmental programs and surveys of fluorides, required by this subsection, shall be maintained and made available to the Department in a manner and on a schedule approved by the Department. Such data shall be available to the public.

d. Modification of Surveillance Programs.

Any modification to the environmental programs and surveys, required under this subsection, must be approved by the Department. Such modification may be initiated by the Department.

(2.0) ___07 TRANSITION FROM PREVIOUS REGULATIONS

___07A Previous Plans for Compliance. All plans for compliance with regulations 43P06 as it became effective on January 28, 1969, which have been approved by the Secretary shall be evaluated by the Department. Any part of such plans which the Department determines relate to an installation which is subject to more restrictive emission control requirements under terms of this amended regulation 10.03.40, as compared to the respective requirements of regulation 43P06 as it became effective on January 28, 1969, will be null and void. If a plan for compliance is declared null and void, an amended plan may be submitted to the Department.

___07B Previous Regulations Remain in Effect in Certain Cases. Provisions of regulation 43P06 as adopted on January 28, 1969 shall remain in effect with regard to installations, plants and matters dealt with in these amendments until the effective dates provided for by these amendments are applicable to the respective plants, installations or matters.

MAXIMUM ALLOWED DISCHARGE OF PARTICULATE MATTER

FROM EXISTING AND MODIFIED FUEL

BURNING INSTALLATIONS

(Installation built before January 17, 1972)

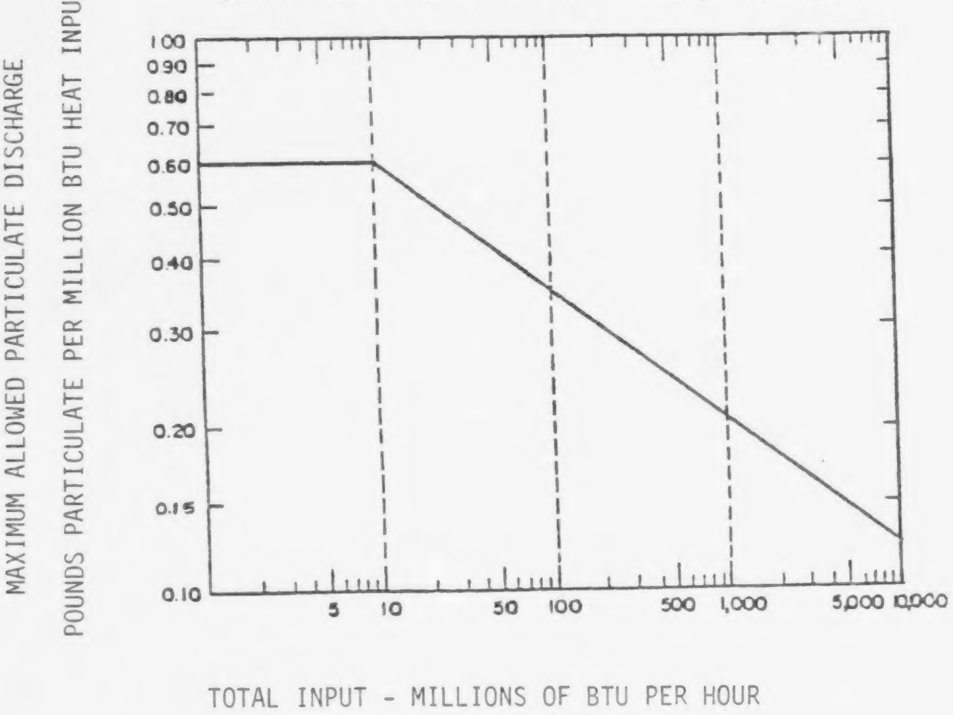

TABLE 1

EMISSION STANDARDS AND DUST COLLECTOR PERFORMANCE STANDARDS FOR NEW FUEL BURNING PLANTS

(Plants built on or after January 17, 1972)

Installation Description	Max. rated heat input in million BTU per hour per furnace	Effective date of Standard	Maximum allowable emissions of particulate matter gr/SCFD	Maximum allowable emission; Shell-Bacharach smoke Spot test number (a)	Required collection efficiency of dust collector
Residual oil burning (c)	5 -<10	Oct. 1, 1972	0.03	4	50% or more
	10 - <51	Oct. 1, 1972	0.025	4	60% or more
	51 - 200	Oct. 1, 1972	0.02	4	70% or more
	Greater than 200	Jan. 17, 1972	0.01	4	80% or more
Distillate oil burning	All sizes	Jan. 17, 1972	No requirement	2	No requirement
Solid fuel burning	All sizes (b)	Jan. 17, 1972	0.03	No requirement	99% or more

(a) The method used for measurement of both residual and distillate oil burning equipment shall be in accordance with method D-2156 published by the American Society for Testing and Materials.

(b) No new coal burning plants having a rated heat input of less than 250 million BTU per hour are allowed. (See __06D2).

(c) No new residual oil burning plants having a heat input of less than 5 million BTU per hour are allowed. (See __06D1).

Table 2

MAXIMUM ALLOWABLE WEIGHT OF PARTICULATE MATTER DISCHARGED PER HOUR

Process Wt/hr (lbs)	Maximum Weight Disch/hr (lbs)	Process Wt/hr (lbs)	Maximum Weight Disch/hr (lbs)	Process Wt/hr (lbs)	Maximum Weight Disch/hr (lbs)
50 or less	0.24	1900	4.03	4700	6.45
100	0.46	2000	4.14	4800	6.52
150	0.66	2100	4.24	4900	6.60
200	0.85	2200	4.34	5000	6.67
250	1.03	2300	4.44	5500	7.03
300	1.20	2400	4.55	6000	7.37
350	1.35	2500	4.64	6500	7.71
400	1.50	2600	4.74	7000	8.05
450	1.63	2700	4.84	7500	8.39
500	1.77	2800	4.92	8000	8.71
550	1.89	2900	5.02	8500	9.03
600	2.01	3000	5.10	9000	9.36
650	2.12	3100	5.18	9500	9.67
700	2.24	3200	5.27	10000	10.00
750	2.34	3300	5.36	11000	10.63
800	2.43	3400	5.44	12000	11.28
850	2.53	3500	5.52	13000	11.89
900	2.62	3600	5.61	14000	12.50
950	2.72	3700	5.69	15000	13.13
1000	2.80	3800	5.77	16000	13.74
1100	2.97	3900	5.85	17000	14.36
1200	3.12	4000	5.93	18000	14.97
1300	3.26	4100	6.01	19000	15.58
1400	3.40	4200	6.08	20000	16.19
1500	3.54	4300	6.15	30000	22.22
1600	3.66	4400	6.22	40000	28.30
1700	3.79	4500	6.30	50000	34.30
1800	3.91	4600	6.37	60000	40.00
				*	
				**	

Relates to ___03E

* For New Plants, process weight in excess governed by equation presented in 10.03.40 03E1b.

** For Modified and Existing Installations, process weight in excess governed by 10.03.40 03E2b.

Table 3

Ambient Air Quality Standards

Pollutant	Frequency Times values may be exceeded per unit time	More Adverse Range				Serious Level		Conversion Factor
		ug/m^3		ppm		ug/m^3	ppm	
		Lower Limit	Upper Limit	Lower Limit	Upper Limit			
1. Sulfur oxides (expressed as sulfur dioxide concentrations)								
Annual Arithmetic Average	Values not to be exceeded	39	79	0.015	0.03	79	0.03	$\frac{ug/m^3}{2620} = ppm$
24 Hour Average	Once per year	131	262	0.05	0.10	262	0.10	
One Hour Average	Once per month	262	525	0.10	0.20	525	0.20	
5-Minute Average	Twice per week	655	1310	0.25	0.50	1310	0.50	
2. Particulate Matter a. Suspended Particulate								
Annual Arithmetic Average	Values not to be exceeded	65	75	-	-	75	-	
24 Hour Average	Once per year	140	160	-	-	160	-	

Table 3 cont'd

Pollutant	Frequency Times values may be exceeded per unit time	More Adverse Range		Serious Level		Conversion Factor
		Lower Limit	Upper Limit			
b. Dustfall		mg/cm^2/month		mg/cm^2/month		
Annual Arithmetic[1] Average	Values not to be exceeded	0.35	0.50	0.50		$\frac{mg/cm^2}{.035} = ton/mi^2$
Monthly Maximum	Values not to be exceeded	0.70	1.00	1.0		
				mg/m^3	ppm	
3. Carbon Monoxide 8-Hour Arithmetic Average[2]	Once per year	No standard		10	9	$mg/m^3 \times 0.873 = ppm$
Hourly Average	Once per year	No standard		40	35	
				ug/m^3	ppm Carbon	
4. Non-methane Hydrocarbons[3] 3-Hour Average[4]	Once per year	No standard		160	0.24	$\frac{ug/m^3}{655} = ppm$
				ug/m^3	ppm Ozone	
5. Photochemical Oxidants						$\frac{ug/m^3}{1960} = ppm$
Maximum Hourly Average	Once per year	No standard		160	0.08	
				ug/m^3	ppm	
6. Nitrogen Dioxide						$\frac{ug/m^3}{1882} = ppm$
Annual Arithmetic Average	Values not to be exceeded	No standard		100	0.05	

References

1. Annual averages shall be based on at least nine monthly samples.

2. Applies in areas representing generalized atmospheric levels; 20 ppm applies in any other place where members of the public congregate for extended periods of time.

3. The standards set forth in this regulation for hydrocarbons are not based upon the direct adverse effects of hydrocarbons but upon an empirical relationship, based upon ambient air quality measurements, between morning hydrocarbon concentrations and oxidant concentrations occurring later the same day. The hydrocarbon standard is designed primarily to achieve the standard for photochemical oxidants. In view of the lack of an exact quantitative relationship, the uncertainties in existing measurement techniques and a lack of full identification of the photochemically reactive species of hydrocarbons occurring in the ambient air in the region, these levels should be considered as tentative pending further scientific developments.

4. Three hour period: 6 a.m. to 9 a.m. Eastern Standard Time.

MARYLAND STATE DEPARTMENT OF HEALTH AND MENTAL HYGIENE
301 West Preston Street
Baltimore, Maryland 21201

(As Amended Through March 13, 1972)

10.03.41 Regulations Governing the Control of Air Pollution in Area VI*

Pursuant to the authority conferred upon the Secretary of Health and Mental Hygiene by Article 43, Annotated Code of Maryland, 1957 Edition, and Supplement, the following regulations governing the control of air pollution in Area VI are hereby established as requirements of the Department of Health and Mental Hygiene.

(51.13) ___01 CONTROL AND PROHIBITION OF OPEN FIRES

___01A General. No person shall cause, suffer, allow or permit an open fire except as provided in section ___01B, ___01C and ___01D.

___01B Control Officer May Authorize Certain Open Fires.

1. Subject to review by the Department, the Control Officer may, upon receipt of an application made on forms provided by the Department or local fire control agency, issue or approve a permit in writing allowing an open fire provided all of the following conditions are met:
    a. The Control Officer is satisfied that there is no practical alternate method to dipose of the material to be burned or to conduct the desired activities.
    b. No hazardous condition or air pollution or nuisance will be created.
    c. Fire control laws or regulations of other governmental agencies will not be violated.
    d. No materials which produce dense smoke when burned, including but not limited to tires and roofing material, will be burned.
    e. The material to be burned shall have originated on the premises on which it is to be burned.
2. The Control Officer may impose other conditions to minimize creation of smoke, to prevent nuisances and air pollution, and to protect the health, safety, comfort and property of any persons.

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*Editor's note: Eastern Shore Area comprised of Caroline, Cecil, Dorchester, Kent, Queen Anne's, Somerset, Talbot, Wicomico, Worcester Counties.

___01C Public Officer May Authorize Certain Fires. Public officers, in the performance of their official duties, may set an open fire or give permission for an open fire, with concurrence of the Control Officer, provided all reasonable means are employed to minimize smoke if the fire is necessary for one or more of the following reasons or purposes:

1. For the prevention of a fire hazard that cannot be abated by other means.

2. For the instruction of public fire fighters or industrial employees under supervision of the appropriate fire control official.

3. For the protection of public health or safety when other means for disposing of hazardous materials are not available.

___01D Allowed Open Fires. Open fires otherwise in conformance with other governmental fire control ordinances, provided no nuisance or air pollution is created, are allowed without permission as follows:

1. In those areas where no provision is made for public collection of leaves, the open burning of leaves originating on the premises by householders is permitted. On and after July 1, 1973, no leaves shall be burned at locations closer than 200 feet from any neighboring habitable dwelling or place where people work or congregate.

2. In those areas where no provision is made for public collection of refuse, burning of ordinary household trash (I.I.A. Waste types 0 and 1 only) originating on the premises, excluding commercial establishments, by householders is permitted provided that:

   a. Materials are not burned which create dense smoke (emissions of an opacity or darkness greater than No. 2 on the Ringelmann Smoke Chart);

   b. On and after July 1, 1973, no refuse shall be burned at locations closer than 200 feet from any neighboring habitable dwelling or place where people work or congregate.

3. Cooking of Food.

4. Fires set in the course of agricultural operations in growing crops or raising fowl or animals or in accepted forestry practice. In no case shall this provision be construed as allowing the burning of ordinary household or barnyard trash in areas where provision is made for public collection of refuse.

5. Recreational purposes, such as campfires.

6. Oil or gas fired salamanders or similar devices designated specifically for space heating or warming of outdoor workers, etc., provided no visible emissions are created.

7. Warming fires for outdoor workers, providing smoke emissions are not darker than No. 2 on the Ringelmann Smoke Chart, and the fires are located no closer than 200 feet from any neighboring habitable building.

(50.1.2) ___02 CONTROL AND PROHIBITION OF VISIBLE EMISSIONS

___02A For the purpose of these regulations:

1. "Existing installation" shall mean those erected prior to the effective date of these regulations. (Date will be noted by reference number for each specific regulation.)

2. "Modified installation" shall mean those altered, changed or added to on or after the effective date of these regulations. (Date will be noted by reference number for each specific regulation.)

3. "New Plant" shall mean any installation for which the major proportion of the fuel burning, incineration, processing or manufacturing equipment in the installation is erected on or after the effective date of these regulations. (Date will be noted by reference number for each specific regulation.) This definition is not intended to apply to a "modified installation" where new control equipment is added to an existing installation. In questionable cases, the determination of new plant shall be made by the Department.

___02B Visible Emissions from New Plants.[1] No person shall cause, suffer, allow or permit the discharge of emissions from any new plant or building other than water in an uncombined form, which are visible to human observers.

___02C Visible Emissions from Existing and Modified Installations.[2]

1. Existing and Modified Bituminous Concrete Manufacturing Plants. No person shall cause, suffer, allow or permit the discharge of emissions from any existing or modified bituminous concrete manufacturing installation other than water in an uncombined form, which are visible to human observers.

2. Other Existing and Modified Installations. No person shall cause, suffer, allow or permit emissions from any other existing installation, modified installation or building that are darker in shade or appearance than that designated as No. 1 on the Ringelmann Smoke Chart; or of such opacity as to obscure an observer's view to a degree greater than does smoke designated as No. 1 on

the Ringelmann Smoke Chart.

___02D Exceptions.

1. Subsections ___02B and ___02C shall not apply to emissions during the building of a new fire, cleaning of fires, soot blowing, start-up and process modification or adjustment, or occasional cleaning of control equipment, the shade or appearance of which is not darker than No. 2 on the Ringelmann Smoke Chart for a period or periods aggregating no more than four minutes in any sixty minutes.

2. Any person who believes that meeting the requirements of subsection ___02B is not practical in a particular instance may request an exception to the requirements of subsection ___02B. Such a request shall be submitted to the Department in writing and include evidence to show why compliance is not practical. Based on evidence presented and other information, the Department may recommend to the Secretary that an exception be granted for a period not exceeding one year at a time under such stated terms and conditions as the Secretary may determine, provided the appellant has shown that:

   a. There presently are no practical ways or means available to enable compliance with subsection ___02B and;

   b. When possible, he is participating vigorously and substantially in activities directed toward finding or developing ways and means which would make it practical to reduce or eliminate visible emissions from the kind of plant which is at issue.

3. Subsection___02B shall not apply to emissions of the following:

   a. From the burning of wood in fireplaces on premises used for residential or recreational purposes;

   b. From open fires (except salamanders) permitted under provisions of subsections ___01B, ___01C and ___01D of this regulation.

4. The Control Officer may grant exceptions to ___02C above under the following conditions:

   a. When the application of ___02C to a residential building housing two or less families creates undue economic hardship on individuals residing therein, or,

   b. When the installation's primary way of transferring heat is by the radiant method rather than a piped fluid system such as forced hot air, hydronic, or steam. Installations in this category would include stoves, room heaters, floor or wall mounted circulating heaters, fireplaces, or similar devices.

(50.1) ___03 CONTROL AND PROHIBITION OF PARTICULATE MATTER EMISSIONS

(50.1) ___03A General Conditions. All calculations of particulate matter emissions shall be made in terms of grains per standard cubic foot dry exhaust gas (gr/SCFD).

1. For fuel burning plants and installations calculations shall be corrected to 50% excess air.

2. For incineration plants and installations calculations shall be corrected to 12% carbon dioxide and as if no auxiliary fuel has been used, except for pathological waste units which shall be corrected to 3.5% carbon dioxide.

(51.5) ___03B Control of Particulate Matter from Fuel Burning Plants and Installations.

1. General Conditions for Fuel Burning Plants and Installations.

   a. When two or more fuel burning plants or installations are connected to a single stack, the combined heat input of all units connected to the stack shall be used to determine the allowable emissions from the stack.

   b. When a single fuel burning plant or installation is connected to two or more stacks, the allowable emissions from all the stacks combined shall not exceed that allowable for the same unit if connected to a single stack.

2. New Fuel Burning Plants.[3]

   a. No person shall cause, suffer, allow or permit particulate matter caused by the combustion of fuel in any new fuel burning plant to be discharged into the atmosphere in excess of the amounts shown in Table 1.

   b. Dust Collection Devices Required on New Fuel Burning Plants.

      (1) Effective October 1, 1972, no person shall cause, suffer, allow or permit the combustion of residual fuel oil in any new fuel burning plant with a fuel burning capacity of less than 200 x 10^6 BTU per hour unless such plant is equipped with a dust collector, the collection efficiency of which meets the requirements shown in Table 1.

(2) Effective immediately, no person shall cause, suffer, allow or permit the combustion of solid fuel in any new fuel burning plant unless such plant is equipped with a dust collector with 99% or more efficiency or the combustion of fuel oil in an oil burning installation with a heat input greater than 200 x 10^6 BTU/hour, unless equipped with a dust collector with an efficiency of 80% or more.

3. Existing and Modified Fuel Burning Installations.[4] No person shall cause, suffer, allow or permit particulate matter caused by the combustion of fuel in any existing or modified fuel burning installation to be discharged from any stack or chimney into the atmosphere in excess of the hourly rate set forth in the following table.

Heat Input in Million BTU per hour	Maximum Allowable Discharge of Particulate Matter in Pounds per Million BTU from Existing and Modified Fuel Burning Installations
Up to and including 10	0.60
10 to 100	0.35
100 to 1000	0.20
Greater than 1000	0.12

For a heat input between any two consecutive heat inputs stated in the preceding table, maximum allowable discharge of particulate matter is shown for existing and modified fuel burning installations on Figure 1. For the purposes hereof, heat input shall be calculated as the aggregate heat content of all fuels whose products of combustion pass through the stack or chimney.

4. Exceptions. The Control Officer may grant exceptions to ___03B3 above under the following conditions:

   a. When the application of subsection ___03B3 to a residential building housing two or less families creates undue economic hardship on individuals residing therein or,

   b. When the installation's primary way of transferring heat is by the radiant method rather than a piped fluid system such as forced hot air, hydronic, or steam. Plants in this category would include stoves, room heaters, floor or wall mounted circulating heaters, fireplaces or similar devices.

(51.9) ___03C Particulate Matter from Incineration Plants and Installations.

1. New Incineration Plants.[5]

   a. No person shall cause, suffer, allow or permit to be discharged into the atmosphere particulate matter to exceed 0.10 gr/SCFD from any new incineration plant that has a burning capacity less than one ton of refuse per hour and is used to burn less than five tons of refuse per day.

b. No person shall cause, suffer, allow or permit to be discharged into the atmosphere particulate matter to exceed 0.03 gr/SCFD from any new incineration plant that has a burning capacity equal to or greater than one ton of refuse per hour or is used to burn five tons or more of refuse per day.

2. Existing and Modified Incineration Installations.[6] No person shall cause, suffer, allow or permit to be discharged into the outdoor atmosphere from any existing or modified incinerator the following:

a. From any existing or modified incinerator burning less than 200 pounds of refuse per hour, particulate matter to exceed 0.3 grain per standard cubic foot of dry flue gas.

b. From any existing or modified incinerator burning 200 or more pounds of refuse per hour, particulate matter to exceed 0.2 grain per standard cubic foot of dry flue gas.

(51.1) ___03D Particulate Matter from Agricultural Operations.

1. Particulate Matter from Grain Drying Installations.

a. No person shall cause, suffer, allow or permit the operation of any grain drying installation unless equipped in such a manner that all exhaust gases discharged pass through a 50 mesh screen; or the installation is equipped with other equipment or incorporated design features that will accomplish the same or more effective results in reducing the discharge of particulate matter.

b. Exceptions. Mobile type grain drying installations, with an operating capacity of 500 bushels per hour or less, located outside a town or village or city and at a distance greater than 300 yards from a habitable dwelling or place of business, shall be exempt from ___03D1a provided no nuisance or air pollution is created.

c. Mesh Sizing refers to the Tyler Standard Screen Scale.

2. Control of Orchard Heaters.

General. No person shall cause, suffer, allow or permit to be used any type of orchard heater or other such frost control device which discharges into the atmosphere more than one gram per minute of unconsumed carbonaceous matter.

(50.1.1) ___03E Particulate Matter from Other Plants and Installations.

1. Other New Plants.[7]

   a. No person shall cause, suffer, allow or permit to be discharged into the outdoor atmosphere from any other new process plant, particulate matter in excess of 0.03 gr/SCFD.

   b. The maximum allowable weight of particulate matter discharged per hour from any other new process plant shall not exceed that determined from Table 2. Where the process weight per hour falls between two values in the table, the maximum weight discharged per hour shall be determined by linear interpolation. When the process weight exceeds 60,000 pounds per hour, the maximum allowable weight discharged per hour will be determined by the use of the following equation:

      $$E = 55.0\ P^{0.11} - 40$$

      Where E = Maximum weight discharged per hour (lbs.)
      P = Process weight rate in tons per hour

      This limitation shall supersede the requirements of section ___03E1a if it requires a lower emission rate per hour.

2. Other Existing and Modified Process Installations.[8]

   a. Existing and Modified Bituminous Concrete Manufacturing Installations. No person shall cause, suffer, allow or permit to be discharged into the atmosphere from any existing or modified bituminous concrete manufacturing installation particulate matter in excess of 0.03 gr/SCFD.

   b. Other Existing and Modified Installations.

      (1) The maximum allowable weight of particulate matter discharged per hour from any other existing or modified process installation shall not exceed that determined from Table 2. Where the process weight per hour falls between two values in the table, the maximum weight discharged per hour shall be determined by linear interpolation. When the process weight exceeds 60,000 pounds per hour, the maximum allowable weight discharged per hour will be determined by use of the following equation:

      $$E = 55.0\ P^{0.11} - 40$$

      Where E = Maximum weight discharged per hour (lbs.)
      P = Process weight rate in tons per hour

      (2) For those processes in which the process weight per hour exceeds 60,000 pounds, the maximum allowable weight of particulate matter discharged per hour may exceed that

calculated by the above equation providing that the concentration of particulate matter in the gases discharged to the atmosphere is less than 0.5 gr/SCFD.

(51.3) ___03F Particulate Matter from Materials Handling and Construction and Other Acts.

1. No person shall cause, suffer, allow or permit any material to be handled, transported, or stored; or a building, its appurtenances, or a road to be used, constructed, altered, repaired or demolished without taking reasonable precautions to prevent particulate matter from becoming airborne. Such reasonable precautions shall include, when appropriate as determined by the Control Officer, but not be limited to the following:

   a. Use of water or chemicals for control of dust in the demolition of existing buildings or structures, construction operations, the grading of roads or the clearing of land;

   b. Application of asphalt, oil, water or suitable chemicals on dirt roads, materials stockpiles, and other surfaces which can create airborne dusts;

   c. Installation and use of hoods, fans and dust collectors to enclose and vent the handling of dusty materials. Adequate containment methods shall be employed during sandblasting of buildings or other similar operations;

   d. Covering, at all times when in motion, open-bodied vehicles transporting materials likely to create air pollution. Alternate means may be employed to achieve the same results as would covering;

   e. The paving of roadways and their maintenance in a clean condition;

   f. The prompt removal from paved streets of earth or other material which has been transported thereto by trucks or earth moving equipment or erosion by water.

2. No person shall cause, suffer, allow or permit visible emissions beyond the lot line of the property on which the emissions originate.

___04 CONTROL AND PROHIBITION OF GAS, VAPOR AND ODOR EMISSIONS

(2.0) ___04A General.

1. Odors. No person shall cause, suffer, allow or permit the discharge into the atmosphere of gases, vapors, or odors beyond the property line in such a manner that a nuisance or air pollution is created.

2. General Conditions. All calculations of emissions governed by ___04C shall be adjusted to standard conditions.

(51.6) ___04B Sulfur Oxides from the Burning of Fuel. No person shall burn, sell or make available for sale any fuel unless the following conditions are met:

1. The combustion of all solid fuels on a premise where the sum total maximum rated heat input of all fuel burning equipment located on the premise is 100 million BTU per hour or greater shall not result in a total emission of oxides of sulfur in excess of 3.5 pounds per million BTU actual heat input per hour.

2. On and after July 1, 1975, residual fuel oil, 2.0 percent.

3. Distillate fuel oils, 0.3 percent.

4. Process gas used as a fuel, 0.3 percent.

(50.2) ___04C Sulfur Compounds from Other than Fuel Burning Installations.

1. No person shall cause, suffer, allow or permit the discharge into the atmosphere from installations other than fuel burning installations, of gases containing more than 2,000 parts per million by volume of sulfur dioxide. Any such installation constructed after the effective date of these regulations (9) shall not discharge into the atmosphere gases containing more than 500 parts per million by volume of sulfur dioxide.

2. No person shall cause, suffer, allow or permit the discharge into the atmosphere from installations other than fuel burning installations, of gases containing sulfuric acid, sulfur trioxide, or any combination thereof, greater than 70 milligrams per cubic meter reported as sulfuric acid. Any such installation constructed after the effective date of these regulations (10) shall not discharge into the atmosphere gases containing sulfuric acid, sulfur trioxide, or any combination thereof, greater than 35 milligrams per cubic meter reported as sulfuric acid.

(2.0) ___04D Exceptions.

1. Fuels containing sulfur in excess of the amounts specified in ___04B may be burned, sold, or made available for sale provided control equipment to desulfurize stack gases has been installed or other methods or devices are employed by the user or purchaser such that the discharge of sulfur dioxide to the atmosphere does not exceed 0.5 pounds per million BTU of heat input to the associated installation in which such fuel is burned.

2. The Secretary may authorize the operation of a scavenger or recovery plant to reclaim sulfur compounds which would otherwise be discharged into the air provided the operation of such a scavenger or

recovery plant would reduce total discharge of sulfur compounds at least 95% with said plant in operation compared to discharge when the aforementioned plant is not operating. Such authorization may result in discharge of sulfur compounds whose concentration exceed those permitted by subsections 1 and 2 of ___04C. This subsection shall not apply to sulfuric acid manufacturing operations.

(9.0) ___04E Request for Analysis. Any person offering to sell or deliver fuel or any person responsible for equipment in which fuel is burned shall, upon request, submit to the Department or the Control Officer such analyses of the fuel as may be required to determine compliance with this section.

(50.6) ___04F Control of Odors from the Reduction of Offal and Vegetable Oil.

1. No person shall cause, suffer, allow or permit the use of an installation primarily engaged in the reduction of offal or vegetable oil unless all gases, vapors and gas-entrained matter from said installation are:

   a. First cooled to a temperature of not greater than 160°F and then

   b. The non-condensible fraction is incinerated at a temperature of not less than 1400°F for a period of not less than 0.4 seconds.

   c. Alternate methods may be used if determined by the Department to be equally or more effective for the purpose of controlling air pollution.

2. Any person processing or incinerating gases, vapors or gas-entrained matter as required by subsection ___04F1 shall install, operate and maintain in good working order and calibration, continuous recording devices for indicating temperature, or pressure or other operating conditions. Such devices shall be approved by the Department and all data collected shall be made available to the Department or the Control Officer for inspection or copying upon request of the Department. Such data shall be kept on file by responsible persons for at least 60 days.

3. No person shall cause, suffer, allow or permit any offal or vegetable oil to be handled, transported or stored or to undertake the preparation of any offal or vegetable oil without taking reasonable precautions to prevent odors from being discharged. Such reasonable precautions, when approved by the Department, shall include but not be limited to the following:

   a. Storage of all offal or vegetable oil prior to or in the process of preparation in properly enclosed and vented equipment or areas, together with the use of effective devices and/or methods to prevent the discharge of odor bearing gases.

b. Use of covered vehicles of watertight construction for the handling and transporting of offal or vegetable oil.

c. Use of hoods and fans to enclose and vent the storage, handling, preparation and conveying of any odorous materials together with effective devices and/or methods to prevent emission of odors or odor bearing gases.

4. Whenever the emissions from an installation primarily engaged in the reduction of offal or vegetable oil create a nuisance or air pollution, beyond the property line, the Department may require that the building in which such installation is located be tightly closed and vented so that all emissions are treated by incineration or by other methods if determined by the Department to be equally or more effective for the purpose of controlling emissions.

5. The requirements of this subsection ___04F shall not apply to any installation engaged exclusively in the processing of food for human consumption.

(51.7) ___04G Nitrogen Oxides from New Fuel Burning Equipment.[11]

1. No person shall cause, suffer, allow or permit the discharge of nitrogen oxides into the atmosphere, from any new fuel burning equipment having a heat input rating of 250 million British Thermal Units (BTU) per hour, or more, in excess of the following rates:

   a. 0.20 pounds per million BTU heat input, maximum two hour average, expressed as NO_2 when gaseous fuel is burned.

   b. 0.30 pounds per million BTU heat input, maximum two hour average, expressed as NO_2 when liquid fuel is burned.

   c. 0.50 pounds per million BTU heat input, maximum two hour average, expressed as NO_2 when solid fuel is burned.

(51.10) ___04H Nitrogen Oxides from Nitric Acid Plants

1. No person shall cause, suffer, allow or permit the discharge into the atmosphere from any existing nitric acid plant,[12] nitrogen oxides in excess of 5.5 pounds per ton of acid (100 percent basis) produced.

2. No person shall cause, suffer, allow or permit the discharge into the atmosphere from any new nitric acid plant,[13] nitrogen oxides in excess of 3.0 pounds per ton of acid (100 percent basis) produced.

(4.0) ___05 AMBIENT AIR QUALITY STANDARDS

___05A Definitions. For purposes of the ambient air quality standards in this section ___05 only, the following definitions shall apply.

1. Sulfur Oxides

Sulfur oxides include sulfur dioxide, sulfur trioxide, their acids, and the salts of their acids. For purposes of these ambient air quality standards, measurements of sulfur dioxide, by the method specified herein, shall be taken to indicate the concentration of sulfur oxides.

2. Particulate Matter

Particulate matter includes the substances collected from and/or settling out of the atmosphere by use of the measurement procedures prescribed herein for suspended particulate matter and dustfall, respectively.

3. Non-methane Hydrocarbons

Non-methane hydrocarbons are a class of organic compounds, excluding methane, whose molecules consist primarily of atoms of hydrogen and carbon and exist in the ambient air in the gaseous state. Specifically excluded are hydrocarbons and other organic compounds associated only with suspended particles in the atmosphere. For purpose of these air quality standards, non-methane hydrocarbons shall be taken to be the difference between the reported total hydrocarbons and methane values measured by the methods specified herein.

4. Photochemical Oxidants

The term photochemical oxidant is used to describe the oxidizing ability of the ambient air. Oxidants are produced in the ambient air as the result of complex photochemical reactions. Because these reactions depend on sunlight, only those oxidant concentrations occurring between 11 a.m. and 5 p.m. EST are considered to be of photochemical origin.

___05B Precepts.

1. It is known that concentrations of air pollutants above certain levels are harmful to the health of man. However, the threshold level at which adverse effects on man's health begin are not known with precision. It must be presumed that adverse effects over a long time period take place at concentrations lower than those now known to produce adverse effects over short time periods. Therefore, in establishing air quality standards, it is prudent to provide for margins of safety in reaching conclusions based on such data as are available which relate health effects to pollutant levels.

2. An ambient air quality standard which would result in avoidable degradation of air quality is in conflict with applicable State law.

3. The ambient air quality standards set forth herein, represent goals expressed in terms of limits on the duration and concentration of pollutants in the atmosphere which are not be contravened. The ambient air quality standards shall be achieved through application, under provisions or laws or regulations or otherwise, of ways and means for reducing pollutant concentrations including but not limited to removal of air pollutants from exhaust gas streams, fuel and process material changes, equipment changes, and land use management.

___05C Primary Ambient Air Quality Standards for All Substances Which May Cause Air Pollution and Control Measures To Be Required.

1. The primary ambient air quality standards for all substances which may cause air pollution shall be those lowest concentrations attainable by application of all reasonably available ways and means for reducing pollutant concentrations in the ambient air. In situations of time and place wherein the lower concentrations of any substance in the "more adverse range" as set forth herein are not exceeded, or when there is no standard for the "more adverse range", the "serious level" is not exceeded, all necessary ways and means shall be required for minimizing increases in concentrations of such substances in the ambient air, to the end that said concentrations shall not be exceeded in the future.

2. No statement, numerical standard, or time limit, contained elsewhere in ambient air quality standards shall be interpreted as mitigating in any way the necessity for and the reasonableness of applying all reasonably available ways and means for reducing pollutant concentrations in the ambient air.

___05D Secondary Ambient Air Quality Standards.

1. General

Secondary ambient air quality standards are presented in two categories: the more adverse range and the serious level. The concentrations denoting each category for various pollutants are presented in Table 3.

2. Air Pollution Control Measures To Be Required in the More Adverse Range. When ambient air concentrations of any pollutant listed in Table 3 are in the more adverse range, as set forth in Table 3, the application of all necessary ways and means for reducing such concentrations shall be required and the time schedule for their implementation shall be based on the premise that the pollutant concentrations are progressively to be reduced to the lower levels or less as set forth in Table 3, within the shortest reasonable time. Such reasonable time should not exceed seven years or such shorter time as may be specified under provisions of the Federal Clean Air Act.

3. Air Pollution Control Measures To Be Required at the Serious Level. When ambient air concentrations of any pollutant listed in Table 3 exceed the serious level, as set forth in Table 3, the application of all necessary ways and means shall be required for reducing such concentrations. The ways and means required and the time schedule for their implementation shall be based on the premise that the pollutant concentrations are progressively to be reduced to levels lower than the serious level concentrations set forth in Table 3 in the shortest possible time. If ambient air concentrations exceed the serious levels specified in Table 3 as of the year 1971, such concentrations should be reduced to less than the serious levels by not later than the end of calendar year 1974. If, in the future, ambient air concentrations first exceed the serious level, such shortest time should not exceed three years from the year in which the serious level is first exceeded, or such shorter time, if any as may be required under provisions of Federal law or regulations. In determining the ways and means to be required for reducing pollutant concentrations, matters of economics and private interests and other factors shall be subordinate considerations to the necessity of achieving the standards, for protection of the public health. Additionally, if standards have been adopted for the more adverse range, measures for reducing concentrations of the pollutant further below the serious level shall be instituted in accordance with provisions of paragraph ___05D2.

4. Measurement of Ambient Air Quality to Compare to the Standards.

   a. The method of measurement for each pollutant listed shall be the method specified in the Federal Register, Vol. 36, No. 84, Part III, April 30, 1971. Other methods may be used if they have been demonstrated to be equally or more specific, accurate, sensitive, and reproducible. Other less specific methods of measurement may be used provided a relationship is developed between results obtained by such method and the method specified and provided that the results are interpreted in terms of equivalence to those that would be expected using the listed methods, or other equally or more specific, accurate, sensitive, reproducible methods. Results shall be expressed as micrograms or milligrams of the pollutant per cubic meter of air, at 25 degrees Centigrade and 760 millimeters of mercury pressure except as specifically noted in Table 3. Such values may be converted to parts per million by volume (ppm) by utilizing the appropriate conversion factor listed in Table 3.

   b. Number and Duration of Measurements

      (1) General. The measurements to be taken to compare to the standards shall be made at the frequency and for the duration as noted in the following appropriate sub-paragraphs.

      (2) Annual arithmetic averages shall be based on results from

at least 52 sampling periods representing 24 hour periods, distributed throughout the year so as to adequately reflect the true annual average. The second highest daily average value so obtained shall be used to relate to the standards expressed as maximum exceeded once per year.

(3) Daily averages shall be based on measurements made during more than 50 percent of the time period represented. Daily averages may also be determined on the basis of a compilation of hourly averages determined as described in (6) below.

(4) Eight-hour averages shall be based upon measurements representing at least 55 percent of the designated eight-hour time periods. Eight-hour averages may also be determined on the basis of a compilation of eight hourly averages during designated time periods as described in (6) below.

(5) Three-hour averages shall be based upon measurements representing at least 55 percent of the period. Three-hour averages may also be made on the basis of a compilation of three individual hourly averages determined as described in (6) below.

(6) Hourly averages shall be based on at least seven momentary indications of the actual concentration during the hour or any more nearly complete representation of actual concentrations.

(7) Five-minute averages shall be based on samples representative of the total period. However, after a relationship has been developed between the maximum five-minute average and any other available averaging time, the relationship may be used to calculate maximum five-minute average value from such other averaging time data.

c. Location of Measurements

Measurements of air pollutants may be made at any place where air pollution could exist.

___05E Secondary Ambient Air Quality Standards for Fluorides.

1. Ambient air quality standards for fluorides at the more adverse and serious levels shall be those concentrations in the ambient air which result in the following values being exceeded:

a. Vegetable Crops:

Vegetable tissue intended for human use, trimmed as normally marketed or consumed shall not exceed 20 micrograms F per gram dry tissue in unwashed samples.

b. Field Crops:

(1) Middle aged fully expanded leaves of corn or sorghum intended for grain shall not, at time of tasseling, exceed 35 micrograms F per gram dry tissue in washed samples.

(2) Any field crops intended for market as hay, silage or forage shall not exceed 40 micrograms F per gram dry tissue in unwashed samples as marketed.

(3) Other field crops at any stage of growth shall not exceed 50 micrograms F per gram dry tissue in washed samples.

c. Cattle Forage:

(1) Running averages of 12 monthly samples of forage or hay or silage grown in the area as feed shall not exceed 40 micrograms F per gram dry tissue in unwashed samples.

(2) The average of any two consecutive months samples of forage or hay or silage grown in the area as feed shall not exceed 60 micrograms F per gram dry tissue in unwashed samples.

(3) No monthly sample of forage or hay or silage grown in the area as feed shall exceed 80 micrograms F per gram dry tissue in unwashed samples.

d. Fruit Trees, Berries and Other Commercial Crops:

Fully expanded functional leaves shall not exceed 50 micrograms F per gram dry tissue in washed samples.

e. Deciduous Trees and Shrubs:

Fully expanded functional leaves shall not exceed 100 micrograms F per gram dry tissue in washed samples.

f. Conifers and Evergreen Trees or Shrubs:

Fully expanded leaves or needles of the current year shall not exceed 50 micrograms F per gram dry tissue in washed samples. Leaves and needles of prior seasons shall not exceed 75 micrograms F per gram dry tissue in washed samples.

g. Grasses and Herbs:

Grasses and herbs not subject to browsing, grazing or harvest for use in feeds or food shall not exceed 150 micrograms F per gram dry tissue in washed samples.

h. Ornamental Plantings:

Ornamental plantings, except trees, shrubs and turf where ___05E1d, ___05E1e, ___05E1f, and 05E1g apply, shall not exceed 40 micrograms F per gram dry tissue in fully expanded leaves, in washed samples, at any period during the growing season.

i. Other Values:

When vegetation sampling is deemed by the Department to be not practicable, unsatisfactory conditions may be assumed to exist by the Department if either:

(1) Static limed filter paper samples of 28 to 32 day exposure exceed five micrograms F per 100 square centimeters per day or,

(2) Gaseous fluorides exceed two micrograms F per cubic meter of air in any 24 hour sample and any 72 hour average exceeds 0.4 micrograms F per cubic meter of air.

2. Air Pollution Control Measures To Be Required. When and where concentrations of fluoride cause any of the values set forth in ___05E1 to be exceeded, the application of all necessary ways and means shall be required for reducing such concentrations. The ways and means to be required and the time schedule for their implementation shall be based on the premise that fluoride concentrations are progressively to be reduced in the shortest possible time to levels that will not cause the values in subsection ___05E1 to be exceeded.

3. Measurement of Fluoride. Methods for measuring the fluoride content of any plant tissue shall be suitable modification of the Willard and Winter method (ref. Willard, H. H. and Winter, O. B. Volumetric Method for Determination of Fluorine. Ind. Eng. Chem. Anal Ed. 5: 7-10, 1933) such as:

> Weinstein, L. H., R. H. Mandl, D. C. McCune, J. S. Jacobson, and A.F. Hitchcock, Semi-Automated Analysis of Fluoride in Biological Materials. J. Air Poll. Control Assoc. 15: 222-5, 1965.

Results are expressed on a dry weight basis in washed and unwashed samples as noted. Micrograms F per gram dry tissue means micrograms of fluoride as the ion, per gram of dry material. Methods of measuring gaseous air samples shall be by the carbonate tube method or the dual tape method by Weinstein et al ref:

> Weinstein, L. H. and R. H. Mandl. The Separation and Collection of Gaseous and Particulate Fluoride. VDI Berichte. 164, 1970.

Other methods may be used if they have been demonstrated to be equally or more specific, accurate, sensitive and reproducible and if first approved by the Department.

(2.0) ___06 CONTROL AND PROHIBITION OF INSTALLATIONS AND OPERATIONS

___06A General. No installation or premise shall be operated or maintained in such a manner that a nuisance or air pollution is created. Nothing in this regulation shall in any manner be construed as authorizing or permitting the creation of or maintenance of a nuisance or air pollution.

___06B Circumvention. No person shall install or use any article, machine, equipment or other contrivance, the use of which, without resulting in a reduction in the total weight of emissions, conceals or dilutes an emission which would otherwise constitute a violation of any applicable air pollution control regulation.

___06C Refuse Burning Prohibited in Certain Installations. No person shall burn refuse in any plant, installation or equipment not specifically designed, constructed or modified for that purpose.

___06D Prohibition of Certain New Fuel Burning Plants. [14]

1. No person shall construct a new fuel burning plant designed for use of residual fuel oil in which any individual furnace has a rated heat input of less than five million BTU per hour nor shall residual fuel oil be used at any time in any new fuel burning plant having a rated heat input of less than five million BTU per hour.

2. No person shall construct a new fuel burning plant designed for use of coal in which any individual furnace has a rated heat input of less than 250 million BTU per hour nor shall coal be used at any time in any new fuel burning plant having a rated heat input of less than 250 million BTU per hour.

___06E Control of Sources of Fluoride Emissions.

1. No person shall cause, suffer, allow or permit the discharge into the atmosphere of fluorides from any installation in such combinations and in such amounts that any provision of the ambient air quality standards for fluorides set forth in ___05E is controvened.

2. Surveillance

   a. Existing Installation Surveillance Program.

   A person responsible for an installation discharging fluorides shall conduct a continuing environmental surveillance program, in a manner approved by the Department, to determine whether ambient air quality standards for fluorides are violated.

b. New Installation Surveillance Program.

No "Permit to Construct" will be issued for any new potential source of fluoride emissions until the applicant has conducted a survey of background levels of fluoride in the environment in a manner and to an extent approved by the Department. Applicants for "Permit to Operate" shall be subject to the requirements of ___06E2a.

c. Reporting.

All data collected by the environmental programs and surveys of fluorides, required by this subsection, shall be maintained and made available to the Department in a manner and on a schedule approved by the Department. Such data shall be available to the public.

d. Modification of Surveillance Programs.

Any modification to the environmental programs and surveys, required under this subsection, must be approved by the Department. Such modification may be initiated by the Department.

(2.0) ___07 TRANSITION FROM PREVIOUS REGULATIONS

___07A Previous Plans for Compliance. All plans for compliance with regulations 43P07 as it became effective on January 28, 1969, which have been approved by the Secretary shall be evaluated by the Department. Any part of such plans which the Department determines relate to an installation which is subject to more restrictive emission control requirements under terms of this amended regulation 10.03.41, as compared to the respective requirements of regulation 43P07 as it became effective on January 28, 1969, will be null and void. If a plan for compliance is declared null and void, an amended plan may be submitted to the Department.

___07B Previous Regulations Remain in Effect in Certain Cases. Provisions of regulation 43P07 as adopted on January 28, 1969 shall remain in effect with regard to installations, plants and matters dealt with in these amendments until the effective dates provided for by these amendments are applicable to the respective plants, installations or matters.

MAXIMUM ALLOWED DISCHARGE OF PARTICULATE MATTER

FROM EXISTING AND MODIFIED FUEL

BURNING INSTALLATIONS

(Installation built before January 17, 1972)

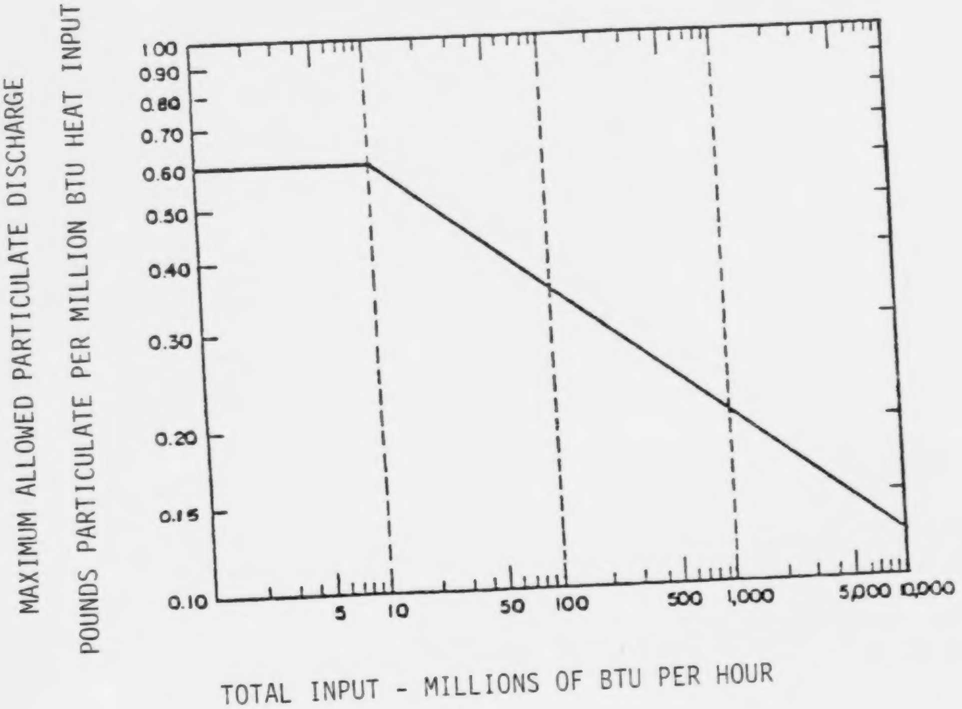

TABLE 1

EMISSION STANDARDS AND DUST COLLECTOR PERFORMANCE STANDARDS FOR NEW FUEL BURNING PLANTS

(Plants built on or after January 17, 1972)

Installation Description	Max. rated heat input in million BTU per hour per furnace	Effective date of Standard	Maximum allowable emissions of particulate matter gr/SCFD	Maximum allowable emission; Shell-Bacharach smoke Spot test number (a)	Required collection efficiency of dust collector
Residual oil burning (c)	5 - 10	Oct. 1, 1972	0.03	4	50% or more
	10 - 51	Oct. 1, 1972	0.025	4	60% or more
	51 - 200	Oct. 1, 1972	0.02	4	70% or more
	Greater than 200	Jan. 17, 1972	0.01	4	80% or more
Distillate oil burning	All sizes	Jan. 17, 1972	No requirement	2	No requirement
Solid fuel burning	All sizes (b)	Jan. 17, 1972	0.03	No requirement	99% or more

(a) The method used for measurement of both residual and distillate oil burning equipment shall be in accordance with method D-2156 published by the American Society for Testing and Materials.

(b) No new coal burning plants having a rated heat input of less than 250 million BTU per hour are allowed. (See ___06D2).

(c) No new residual oil burning plants having a heat input of less than 5 million BTU per hour are allowed. (See ___06D1).

Table 2

MAXIMUM ALLOWABLE WEIGHT OF PARTICULATE MATTER DISCHARGED PER HOUR

Process Wt/hr (lbs)	Maximum Weight Disch/hr (lbs)	Process Wt/hr (lbs)	Maximum Weight Disch/hr (lbs)	Process Wt/hr (lbs)	Maximum Weight Disch/hr (lbs)
50 or less	0.24	1900	4.03	4700	6.45
100	0.46	2000	4.14	4800	6.52
150	0.66	2100	4.24	4900	6.60
200	0.85	2200	4.34	5000	6.67
250	1.03	2300	4.44	5500	7.03
300	1.20	2400	4.55	6000	7.37
350	1.35	2500	4.64	6500	7.71
400	1.50	2600	4.74	7000	8.05
450	1.63	2700	4.84	7500	8.39
500	1.77	2800	4.92	8000	8.71
550	1.89	2900	5.02	8500	9.03
600	2.01	3000	5.10	9000	9.36
650	2.12	3100	5.18	9500	9.67
700	2.24	3200	5.27	10000	10.00
750	2.34	3300	5.36	11000	10.63
800	2.43	3400	5.44	12000	11.28
850	2.53	3500	5.52	13000	11.89
900	2.62	3600	5.61	14000	12.50
950	2.72	3700	5.69	15000	13.13
1000	2.80	3800	5.77	16000	13.74
1100	2.97	3900	5.85	17000	14.36
1200	3.12	4000	5.93	18000	14.97
1300	3.26	4100	6.01	19000	15.58
1400	3.40	4200	6.08	20000	16.19
1500	3.54	4300	6.15	30000	22.22
1600	3.66	4400	6.22	40000	28.30
1700	3.79	4500	6.30	50000	34.30
1800	3.91	4600	6.37	60000	40.00
				*	
				**	

Relates to ___03E

* For New Plants, process weight in excess governed by equation presented in 10.03.40 03E1b.

** For Modified and Existing Installations, process weight in excess governed by 10.03.40 03E2b.

Table 3

Ambient Air Quality Standards

Pollutant	Frequency Times values may be exceeded per unit time	More Adverse Range				Serious Level		Conversion Factor
		ug/m^3		ppm		ug/m^3	ppm	
		Lower Limit	Upper Limit	Lower Limit	Upper Limit			
1. Sulfur oxides (expressed as sulfur dioxide concentrations)								
Annual Arithmetic Average	Values not to be exceeded	39	79	0.015	0.03	79	0.03	$\frac{ug/m^3}{2620} = ppm$
24 Hour Average	Once per year	131	262	0.05	0.10	262	0.10	
One Hour Average	Once per month	262	525	0.10	0.20	525	0.20	
5-Minute Average	Twice per week	655	1310	0.25	0.50	1310	0.50	
2. Particulate Matter a. Suspended Particulate								
Annual Arithmetic Average	Values not to be exceeded	65	75	-	-	75	-	
24 Hour Average	Once per year	140	160	-	-	160	-	

Table 3 cont'd

Pollutant	Frequency Times values may be exceeded per unit time	More Adverse Range Lower Limit	 Upper Limit	Serious Level		Conversion Factor
b. Dustfall		mg/cm^2/month		mg/cm^2/month		
Annual Arithmetic[1] Average	Values not to be exceeded	0.35	0.50	0.50		$\frac{mg/cm^2}{.035}$ = ton/mi^2
Monthly Maximum	Values not to be exceeded	0.70	1.00	1.0		
3. Carbon Monoxide				mg/m^3	ppm	
8-Hour Arithmetic Average[2]	Once per year	No standard		10	9	mg/m^3 x 0.873 = ppm
Hourly Average	Once per year	No standard		40	35	
4. Non-methane Hydrocarbons[3] 3-Hour Average[4]	Once per year	No standard		ug/m^3 160	ppm Carbon 0.24	$\frac{ug/m^3}{655}$ = ppm
5. Photochemical Oxidants				ug/m^3	ppm Ozone	
Maximum Hourly Average	Once per year	No standard		160	0.08	$\frac{ug/m^3}{1960}$ = ppm
6. Nitrogen Dioxide				ug/m^3	ppm	
Annual Arithmetic Average	Values not to be exceeded	No standard		100	0.05	$\frac{ug/m^3}{1882}$ = ppm

References

1. Annual averages shall be based on at least nine monthly samples.

2. Applies in areas representing generalized atmospheric levels; 20 ppm applies in any other place where members of the public congregate for extended periods of time.

3. The standards set forth in this regulation for hydrocarbons are not based upon the direct adverse effects of hydrocarbons but upon an empirical relationship, based upon ambient air quality measurements, between morning hydrocarbon concentrations and oxidant concentrations occurring later the same day. The hydrocarbon standard is designed primarily to achieve the standard for photochemical oxidants. In view of the lack of an exact quantitative relationship, the uncertainties in existing measurement techniques and a lack of full identification of the photochemically reactive species of hydrocarbons occurring in the ambient air in the region, these levels should be considered as tentative pending further scientific developments.

4. Three hour period: 6 a.m. to 9 a.m. Eastern Standard Time.

FEDERALLY PROMULGATED REGULATIONS

(10.0) 52.1076 Review of new sources and modifications.

(a) The requirements of 51.18 of this chapter are not met because the State failed to submit a plan for review of new or modified indirect sources.

(b) Regulation for review of new of modified indirect sources. The provisions of 52.22 (b) of this chapter are hereby incorporated by reference and made a part of the applicable implementation plan for the State of Maryland.

(b) Regulation for Review of New or Modified Indirect Sources

(1) All terms used in this paragraph but not specifically defined below shall have the meaning given them in 52.01 of this chapter.

(i) The term "indirect source" means a facility, building, structure, or installation which attracts or may attract mobile source activity that results in emissions of a pollutant for which there is a national standard. Such indirect sources include, but are not limited to:

(a) Highways and roads.

(b) Parking facilities.

(c) Retail, commercial and industrial facilities.

(d) Recreation, amusement, sports and entertainment facilities.

(e) Airports.

(f) Office and Government buildings.

(g) Apartment and condominium buildings.

(h) Education facilities.

(ii) The term "Administrator" means the Administrator of the Environmental Protection Agency or his designated agent.

(iii) The term "associated parking area" means a parking facility or facilities owned and/or operated in conjunction with an indirect source.

(iv) The term "aircraft operation" means an aircraft take-off or landing.

(v) The phrase "to commence construction" means to engage in a continuous program of on-site construction including site clearance, grading, dredging, or land filling specifically designed for an indirect source in preparation for the fabrication, erection, or installation of the building components of the indirect source. For the purpose of this paragraph, interruptions resulting from acts of God, strikes, litigation, or other matters beyond the control of the owner shall be disregarded in determining whether a construction or modification program is continuous.

(vi) The phrase "to commence modification" means to engage in a continuous program of on-site modification, including site clearance, grading, dredging, or land filling in preparation for specific modification of the indirect source.

(vii) The term "highway section" means the development proposal of a highway of substantial length between logical termini (major crossroads, population centers, major traffic generators, or similar major highway control elements) as normally included in a single location study or multi-year highway improvement program as set forth in 23 CFR 770.201 (38 FR 31677).

(viii) The term "highway project" means all or a portion of a highway section which would result in a specific construction contract.

(ix) The term "Standard Metropolitan Statistical Area (SMSA)" means such areas as designated by the U.S. Bureau of the Budget in the following publication: "Standard Metropolitan Statistical Area," issued in 1967, with subsequent amendments.

(2) The requirements of this paragraph are applicable to the following:

(i) In an SMSA:

(a) Any new parking facility or other new indirect source with an associated parking area, which has a new parking capacity of 1,000 cars or more; or

(b) Any modified parking facility, or any modification of an associated parking area, which increases parking capacity by 500 cars or more; or

(c) Any new highway project with an anticipated average annual daily traffic volume of 20,000 or more vehicles per day within ten years of construction; or

(d) Any modified highway project which will increase average annual daily traffic volume by 10,000 or more vehicles per day within ten years after modification.

(ii) Outside an SMSA:

(a) Any new parking facility, or other new indirect source with an associated parking area, which has a parking capacity of 2,000 cars or more; or

(b) Any modified parking facility, or any modification of an associated parking area, which increases parking capacity by 1,000 cars or more.

(iii) Any airport, the construction or general modification program of which is expected to result in the following activity within ten years of construction or modification:

(a) New airport: 50,000 or more operations per year by regularly scheduled air carriers, or use by 1,600,000 or more passengers per year.

(b) Modified airport: Increase of 50,000 or more operations per year by regularly scheduled air carriers over the existing volume of operations, or increase of 1,600,000 or more passengers per year.

(iv) Where an indirect source is constructed or modified in increments which individually are not subject to review under this paragraph, and which are not part of a program of construction or modification in planned incremental phases approved by the Administrator, all such increments commenced after December 31, 1974, or after the latest approval hereunder, whichever date is most recent, shall be added together for determining the applicability of this paragraph.

(3) No owner or operator of an indirect source subject to this paragraph shall commence construction or modification of such source after December 31, 1974, without first obtaining approval from the Administrator. Application for approval to construct or modify shall be by means prescribed by the Administrator, and shall include a copy of any draft or final environmental impact statement which has been prepared pursuant to the National Environmental Policy Act (42 U.S.C. 4321). If not included in such environmental impact statement, the Administrator may request the following information:

(i) For all indirect sources subject to this paragraph, other than highway projects:

(a) The name and address of the applicant.

(b) A map showing the location of the site of indirect source and the topography of the area.

(c) A description of the proposed use of the site, including the normal hours of operation of the facility, and the general types of activities to be operated therein.

(d) A site plan showing the location of associated parking areas, points of motor vehicle ingress and egress to and from the site and its associated parking areas, and the location and height of buildings on the site.

(e) An identification of the principal roads, highways, and intersections that will be used by motor vehicles moving to or from the indirect source.

(f) An estimate, as of the first year after the date the indirect source will be substantially complete and operational, of the average daily traffic volumes, maximum traffic volumes for one-hour and eight-hour periods, and vehicle capacities of the principal roads, highways, and intersections identified pursuant to subdivision (i) (e) of this subparagraph located within one-fourth mile of all boundaries of the site.

(g) Availability of existing and projected mass transit to service the site.

(h) Where approval is sought for indirect sources to be constructed in incremental phases, the information required by this subparagraph (3) shall be submitted for each phase of the construction project.

(i) Any additional information or documentation that the Administrator deems necessary to determine the air quality impact of the indirect source, including the submission of measured air quality data at the proposed site prior to construction or modification.

(ii) For airports:

(a) An estimate of the average number and maximum number of aircraft operations per day by type of aircraft during the first, fifth and tenth years after the date of expected completion.

(b) A description of the commercial, industrial, residential and other development that the applicant expects will occur within three miles of the perimeter of the airport within the first five and the first ten years after the date of expected completion.

(c) Expected passenger loadings at the airport.

(d) The information required under subdivisions (i) (a) through (i) of this subparagraph.

(iii) For highway projects:

(a) A description of the average and maximum traffic volumes for one, eight, and 24-hour time periods expected within 10 years of date of expected completion.

(b) An estimate of vehicle speeds for average and maximum traffic volume conditions and the vehicle capacity of the highway project.

(c) A map showing the location of the highway project, including the location of buildings along the right-of-way.

(d) A description of the general features of the highway project and associated right-of-way, including the approximate heignt of buildings adjacent to the highway.

(e) Any additional information or documentation that the Administrator deems necessary to determine the air quality impact of the indirect source, including the submission of measured air quality data at the proposed site prior to construction or modification.

(iv) For indirect sources other than airports and those highway projects subject to the provisions of paragraph (b) (6) (iii) of this section, the air quality monitoring requirements of paragraph (b) (3) (i) (i) of this section shall be limited to carbon monoxide, and shall be conducted for a period of not more than 14 days.

(4) (i) For indirect sources other than highway projects and airports, the Administrator shall not approve an application to construct or modify if he determines that the indirect source will:

(a) Cause a violation of the control strategy of any applicable state implementation plan; or

(b) Cause or exacerbate a violation of the national standards for carbon monoxide in any region or portion thereof.

(ii) The Administrator shall make the determination pursuant to paragraph (b) (4) (i) (b) of this section by evaluating the anticipated concentration of carbon monoxide at reasonable receptor or exposure sites which will be affected by the mobile source activity expected to be attracted by the indirect source. Such determination may be made by using traffic flow characteristic guidelines published by the Environmental Protection Agency which relate traffic demand and capacity considerations to ambient carbon monoxide impact, by use of appropriate atmospheric diffusion models (examples of which are referenced in Appendix O to Part 51 of this chapter), and/or by any other reliable analytic method. The applicant may (but need not) submit with his application, the results of an appropriate diffusion model and/or any other reliable analytic method, along with the technical data and information supporting such results. Any such results and supporting data submitted by the applicant shall be considered by the Administrator in making his determination pursuant to paragraph (b) (4) (i) (b) of this section.

(5) (i) For airports subject to this paragraph, the Administrator shall base his decision on the approval or disapproval of an application on the considerations to be published as an Appendix to this Part.

(ii) For highway projects and parking facilities specified under paragraph (b) (2) of this section which are associated with airports, the requirements and procedures specified in paragraphs (b) (4) and (6) (i) and (ii) of this section shall be met.

(6) (i) For all highway projects subject to this paragraph, the Administrator shall not approve an application to construct or modify if he determines that the indirect source will:

(a) Cause a violation of the control strategy of any applicable state implementation plan; or

(b) Cause or exacerbate a violation of the national standards for carbon monoxide in any region or portion thereof.

(ii) The determination pursuant to paragraph (b) (6) (i) (b) of this section shall be made by evaluating the anticipated concentration of carbon monoxide at reasonable receptor or exposure sites which will be affected by the mobile source activity expected on the highway for the ten year period following the expected date of completion according to the procedures specified in paragraph (b) (4) (ii) of this section.

(iii) For new highway projects subject to this paragraph with an anticipated average daily traffic volume of 50,000 or more vehicles within ten years of construction, or modifications to highway projects subject to this paragraph which will increase average daily traffic volume by 25,000 or more vehicles within ten years after modification, the Administrator's decision on the approval or disapproval of an application shall be based on the considerations to be published as an Appendix to this Part in addition to the requirements of paragraph (b) (6) (i) of this section.

(7) The determination of the air quality impact of a proposed indirect source "at reasonable receptor or exposure sites", shall mean such locations where people might reasonably be exposed for time periods consistent with the national ambient air quality standards for the pollutants specified for analysis pursuant to this paragraph.

(8) (i) Within 20 days after receipt of an application or addition thereto, the Administrator shall advise the owner or operator of any deficiency in the information submitted in support of the application. In the event of such a deficiency, the date of receipt of the application for the purpose of paragraph (b) (8) (ii) of this section shall be the date on which all required information is received by the Administrator.

(ii) Within 30 days after receipt of a complete application, the Administrator shall:

(a) Make a preliminary determination whether the indirect source should be approved, approved with conditions in accordance with paragraphs (b) (9) or (10) of this section, or disapproved.

(b) Make available in at least one location in each region in which the proposed indirect source would be constructed, a copy of all materials submitted by the owner or operator, a copy of the Administrator's preliminary determination, and a copy or summary of other materials, if any, considered by the Administrator in making his preliminary determination; and

(c) Notify the public, by prominent advertisement in a newspaper of general circulation in each region in which the proposed indirect source would be constructed, of the opportunity for written public comment on the information submitted by the owner or operator and the Administrator's preliminary determination on the approvability of the indirect source.

(iii) A copy of the notice required pursuant to this subparagraph shall be sent to the applicant and to officials and agencies having cognizance over the location where the indirect source will be situated, as follows: State and local air pollution control agencies, the chief executive of the city and county; any comprehensive regional land use planning agency; and for highways, any local board or committee charged with responsibility for activities in the conduct of the urban transportation planning process (3-C process) pursuant to 23 U.S.C. 134.

(iv) Public comments submitted in writing within 30 days after the date such information is made available shall be considered by the Administrator in making his final decision on the application. No later than 10 days after the close of the public comment period, the applicant may submit a written response to any comments submitted by the public. The Administrator shall consider the applicant's response in making his final decision. All comments shall be made available for public inspection in at least one location in the region in which the indirect source would be located.

(v) The Administrator shall take final action on an application within 30 days after the close of the public comment period. The Administrator shall notify the applicant in writing of his approval, conditional approval, or denial of the application, and shall set forth his reasons for conditional approval or denial. Such notification shall be made available for public inspection in at least one location in the region in which the indirect source would be located.

(vi) The Administrator may extend each of the time periods specified in paragraphs (b) (8) (ii), (iv), or (v) of this section by no more than 30 days, or such other period as agreed to by the applicant and the Administrator.

(9) (i) Whenever an indirect source as proposed by an owner or operator's application would not be permitted to be constructed for failure to meet the tests set forth pursuant to paragraphs (b) (4) (i), (b) (5) (i), or (b) (6) (i) and (iii) of this section, the Administrator may impose reasonable conditions on an approval related to the air quality aspects of the proposed indirect source so that such source, if constructed or modified in accordance with such conditions, could meet the tests set forth pursuant to paragraphs (b) (4) (i), (b) (5) (i), or (b) (6) (i) and (iii) of this section. Such conditions may include, but not be limited to:

(a) Binding commitments to roadway improvements or additional mass transit facilities to serve the indirect source secured by the owner or operator from governmental agencies having jurisdiction thereof;

(b) Binding commitments by the owner or operator to specific programs for mass transit incentives for employees and patrons of the source; and

(c) Binding commitments by the owner or operator to construct, modify, or operate the indirect source in such a manner as may be necessary to achieve the traffic flow characteristics published by the Environmental Protection Agency pursuant to paragraph (b) (4) (ii) of this section.

(ii) The Administrator may specify that any items of information provided in an application for approval related to the operation of an indirect source which may affect the source's air quality impact shall be considered permit conditions.

(10) Notwithstanding the provisions relating to modified indirect sources contained in paragraph (b) (2) of this section, the Administrator may condition any approval by reducing the extent to which the indirect source may be further modified without resubmission for approval under this paragraph.

(11) Any owner or operator who fails to construct an indirect source in accordance with the application as approved by the Administrator; any owner or operator who fails to construct and operate an indirect source in accordance with conditions imposed by the Administrator under paragraph (b) (9) of this section; any owner or operator who modifies an indirect source in violation of conditions imposed by the Administrator under paragraph (b) (10) of this section; or any owner or operator of an indirect source subject to this paragraph who commences construction or modification thereof after December 31, 1974, without applying for and receiving approval hereunder, shall be subject to the penalties specified under section 113 of the Act and shall be considered in violation of an emission standard or limitation under section 304 of the Act. Subsequent modification to an approved indirect source may be made without applying for permission pursuant to this paragraph only where such modification would not violate any condition imposed pursuant to paragraphs (b) (9) and (10) of this section and would not be subject to the modification criteria set forth in paragraph (b) (2) of this section.

(12) Approval to construct or modify shall become invalid if construction or modification is not commenced within 24 months after receipt of such approval. The Administrator may extend such time period upon satisfactory showing that an extension is justified. The applicant may apply for such an extension at the time of initial application or at any time thereafter.

(13) Approval to construct or modify shall not relieve any owner or operator of the responsibility to comply with the control strategy and all local, State and Federal regulations which are part of the applicable State implementation plan.

(14) Where the Administrator delegates the responsibility for implementing the procedures for conducting indirect source review pursuant to this paragraph to any agency, other than a regional office of the Environmental Protection Agency, the following provisions shall apply:

(i) Where the agency designated is not an air pollution control agency, such agency shall consult the appropriate State or local air pollution control agency prior to making any determination required by paragraphs (b) (4), (5), or (6) of this section. Similarly, where the agency designated does not have continuing responsibilities for land use planning, such agency shall consult with the appropriate State or local land use and transportation planning agency prior to making any determination required by paragraph (b) (9) of this section.

(ii) The Administrator of the Environmental Protection Agency shall conduct the indirect source review pursuant to this paragraph for any indirect source owned or operated by the United States Government.

(iii) A copy of the notice required pursuant to paragraph (b) (8) (ii) (c) of this section shall be sent to the Administrator through the appropriate Regional Office.

(15) In any area in which a "management of parking supply" regulation which has been promulgated by the Administrator is in effect, indirect sources which are subject to review under the terms of such a regulation shall not be required to seek review under this paragraph but instead shall be required to seek review pursuant to such management of parking supply regulation. For purposes of this paragraph, a "management of parking supply" regulation shall be any regulation promulgated by the Administrator as part of a transportation control plan pursuant to the Clean Air Act which requires that any new or modified facility containing a given number of parking spaces shall receive a permit or other prior approval, issuance of which is to be conditioned on air quality considerations.

(16) Notwithstanding any of the foregoing provisions to the contrary, the operation of this paragraph is hereby suspended pending further notice. No facility which commences construction prior to the expiration of the sixth month after the operation of this paragraph is reinstated (as to that type of facility) shall be subject to this paragraph.

(37 FR 10846, May 31, 1972 as amended at 40 FR 28065, July 3, 1975; 40 FR 40160, Sept. 2, 1975)

(9.0) 52.1077 Source surveillance.

(c) Monitoring Transporting Sources.

(1) This section is applicable to the State of Maryland.

(2) In order to assure the effectiveness of the inspection and maintenance programs and the retrofit devices required under 52.1089, 52.1091, 52.1092, 52.1093, 52.1094, 52.1095, 52.1096, 52.1097, 52.1098, 52.1099, and 52.1100 the State shall monitor the actual per-vehicle emissions reductions occurring as a result of such measures. All data obtained from such monitoring shall be included in the quarterly report submitted to the Administrator by the State in accordance with 51.7 of this chapter. The first quarterly report shall cover the period January 1 to March 31, 1976.

(3) In order to assure in the Maryland portion of the National Capital Interstate Region the effective implementation of the carpool locator, express bus lanes, increased bus fleet and service, elimination of free on-street commuter parking and the parking surcharge approved in 52.1073 (b) and to assure in the Metropolitan Baltimore Intrastate Region the effective implementation of the traffic flow improvement program and the increased bus fleet approved in 52.1073 (d) and the exclusive bus lanes required under 52.1108, the carpool locator program required under 52.1104, the parking restrictions and limitations required under 52.1109, and 52.1111, and the bikeways required under 52.1106, the State shall monitor vehicle miles traveled and average vehicle speed for each area in which such sections are in effect and during such sections are in effect and during such time periods as may be appropriate to evaluate the effectiveness of such a program. All data obtained from such monitoring shall be included in the quarterly report submitted to the Administrator by the State of Maryland in accordance with 51.7 of this chapter. The first quarterly report shall cover the period from July 1 to September 30, 1974. The vehicle miles travelled and vehicle speed data shall be collected on a monthly basis and submitted in a format similar to Table 1.

Table 1

Time period --
Affected area--

Roadway type	VMT or average vehicle speed	
	Vehicle type (1)	Vehicle type (2)[1]
Freeway------------		
Arterial-----------		
Collector----------		
Local--------------		

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[1] Continue with other vehicle types as appropriate

(4) No later than March 1, 1974, the State shall be submitted to the Administrator a compliance schedule to implement this section. The program description shall include the following:

(i) The agency or agencies responsible for conducting overseeing, and maintaining the monitoring program.

(ii) The administrative procedures to be used.

(iii) A description of the methods to be used to collect the emission data, VMT data, and vehicle speed data; a description of the geographical area to which the data apply; identification of the location at which the data will be collected; and the time periods during which the data will be collected.

(37 FR 10870, May 31, 1972, as amended at 38 FR 16566, June 22, 1973; 38 FR 33716, Dec. 6, 1973; 38 FR 34238, Dec. 12, 1973)

(6.0) 52.1080 Compliance schedules.

(a) The requirements of 51.15 (c) of this chapter are not met since compliance schedules with adequate increments of progress have not been submitted for every source for which they are required.

(b) (Reserved)

(c) With respect to the transportation control strategies submitted by the State, the requirements of 51.15 of this chapter are not fully met for the measures for parking surcharge, elimination of free on-street commuter parking, elimination of free employee parking, increased bus fleet and service, and exclusive bus lanes. Provisions to implement the requirements of 51.15 of this chapter are promulgated in this section.

(d) With respect to the parking surcharge measure approved in 52.1073:

(1) The State of Maryland shall not later than June 30, 1974, submit to the Administrator for his approval a precise description of areas within the Maryland portion of the National Capital Interstate AQCR which are at the time adequately served by mass transit, and those areas which in the judgement of the State will be adequately served by mass transit by June 30, 1975. The documentation and policy assumptions used to select these areas shall be included with this submission.

(2) The State of Maryland shall by June 30, 1975, and each succeeding year submit to the Administrator for his approval a revised list of those areas which are adequately served by mass transit. Additional areas must be included as mass transit service is increased, unless the State can affirmatively demonstrate that

no additional areas can be included.

(e) With respect to the measure for elimination of free on-street commuter parking approved in 52.1073:

(1) Each political subdivision of the State of Maryland within the National Capital Interstate AQCR shall, no later than June 30, 1974, submit to the Administrator for his approval a compliance schedule, including legally adopted regulations, enforcement procedures, and a description of resources available. The compliance schedule shall provide:

(i) For implementing the on-street parking ban in all areas within which a surcharge will be required by paragraph (d) of this section. This program shall prohibit all parking for more than two hours by non-residents of the area subject to the ban during the hours from 7 a.m. to 7 p.m. Monday through Friday (excepting holidays) on any street within such areas. The program shall also provide for a sticker system, under which residents of such area may also be exempted from the ban, and for a system (whether by notification to the enforcement authorities, or otherwise) for also exempting bona fide visitors to residents of such areas from the ban.

(ii) The precise resources that will be devoted to enforcing this measure, the method of enforcement to be used (for example, chalking tires), and the penalties for violation. The compliance schedule shall at a minimum provide that violaters shall be subject to a $10.00 fine.

(f)
(g) (Reserved)

(h) With respect to the express bus lane measure approved in 52.1073:

(1) The State of Maryland shall no later than January 1, 1975, establish exclusive bus lanes in the following corridors:

(i) U.S. Route from New Carrollton to the Maryland-District of Columbia boundary.

(ii) Pennsylvania Avenue and Maryland Route 4 from Andrews Air Force Base to the Maryland-District of Columbia boundary.

(iii) U.S. Route 240 from Old Georgetown Road to the Maryland-District of Columbia boundary.

(iv) New Hampshire Avenue from U.S. Route 29 to the Maryland-District of Columbia boundary.

Such lanes shall be inbound during the morning peak and outbound during the evening peak periods.

(2) The State of Maryland shall submit to the Administrator, no later than March 1, 1974, a schedule showing the steps which it will take to establish exclusive bus lanes in those corridors enumerated in paragraph (h)(1) of this section. Each schedule shall be subject to approval by the Administrator and shall include as a minimum the following:

(i) Identification of streets of highways that shall have portions designated for exclusive bus lanes.

(ii) The date by which each street or highway shall be designated.

(3) Exclusive bus lanes must be prominently indicated by distinctively painted lines, pylons, overhead signs, or physical barriers.

(4) Application for substitution of a corridor for any of those listed in paragraph (h)(1) of this section shall be made by the State of Maryland for the Administrator's approval no later than March 1, 1974.

(i) With respect to the transportation control strategies submitted on April 16, June 15, June 28, and July 9, 1973, by the State for the Metropolitan Baltimore Intrastate AQCR, the requirements of 51.14 (a)(3)(iv) of this chapter are not fully met for the measures for increased bus fleet and traffic flow improvements. Provisions to satisfy the requirements of 51.14 (a)(3)(iv) of this chapter and to cure lack of compliance with 51.11 (c) and 51.14 (a)(3)(i) of this chapter are promulgated in paragraphs (j) and (k) of this section.

(j) (Reserved)

(k) With respect to the measures for traffic flow improvements approved in 52.1073 (d):

(1) The State of Maryland and, with respect to projects under its control, the City of Baltimore, shall, on or before March 1, 1974, each submit to the Administrator a compliance schedule which shall be subject to the Administrator's approval and which shall include, at a minimum, copies of all relevant sources of authority for the program of traffic flow improvements, a signed statement by the Governor of Maryland, the Mayor of Baltimore or their designees, identifying the sources of funding for the program, and a complete list of specific projects and their estimated initiation and completion dates. All projects necessary to the pollution reduction benefits claimed in the State plan must be completed by May 31, 1977. On or before May 1, 1974, the State of Maryland and the City of Baltimore shall submit to the Administrator legally adopted regulations providing for compliance schedule.

(2) The State of Maryland and the City of Baltimore shall in the compliance schedule required pursuant to this paragraph, indicate for each project in the traffic management program the increase anticipated in average annual daily traffic volume within twenty years of project completion on the road or highway in question because of the project. No project shall be approved by the Administrator if the air pollution benefits in terms of speeding traffic flow will be negated by increased traffic volume.

(38 FR 16145, June 20, 1973, as amended at 38 FR 33717, Dec. 6, 1973; 38 FR 34248, Dec. 12, 1973; 39 FR 1849, Jan. 15, 1974; 40 FR 16846, Apr. 15, 1975; 41 FR 54757, Dec. 15, 1976; 42 FR 7958, Feb. 3, 1977)

(51.16) 52.1086 Gasoline transfer vapor control.

(a) "Gasoline" means any petroleum distillate having a Reid vapor pressure of 4 pounds or greater.

(b) This section is applicable in the Maryland portion of the National Capital Interstate AQCR.

(c) No person shall transfer gasoline from any delivery vessel into any stationary storage container with a capacity greater than 250 gallons unless the displaced vapors from the storage container are processed by a system that prevents release to the atmosphere of no less than 90 percent by weight of organic compounds in said vapors displaced from the stationary container location.

(1) The vapor recovery portion of the system shall include one or more of the following:

(i) A vapor-tight return line from the storage container to the delivery vessel and a system that will ensure that the vapor return line is connected before gasoline can be transferred into the container.

(ii) Refrigeration-condensation system or equivalent designed to recover no less than 90 percent by weight of the organic compounds in the displaced vapor.

(2) If a "vapor-tight vapor return" system is used to meet the requirements of this section, the system shall be so constructed as to be readily adapted to retrofit with an adsorption system, refrigeration-condensation system, or equivalent vapor removal system, and so contructed as to anticipate compliance with 52.1087 of this chapter.

(3) The vapor-laden delivery vessel shall be subject to the following conditions:

(i) The delivery vessel must be so designed and maintained as to be vaportight at all times.

(ii) The vapor-laden delivery vessel may be refilled only at facilities equipped with a vapor recovery system or the equivalent, which can recover at least 90 percent by weight of the organic compounds in the vapors displaced from the delivery vessel during refilling.

(iii) Gasoline storage compartments of 1,000 gallons or less in gasoline delivery vehicles presently in use on the promulgation date of this regulation will not be required to be retrofitted with a vapor return system until January 1, 1977.

(iv) Facilities which have a daily throughput of 20,000 gallons of gasoline or less are required to have a vapor recovery system in operation no later than May 31, 1977. Delivery vessels and storage containers served exclusively by facilities required to have a vapor recovery system in operation no later than May 31, 1977, also are required to meet the provisions of this section no later than May 31, 1977.

(d) The provisions of paragraph (c) of this section shall not apply to the following:

(1) Stationary containers having a capacity less than 550 gallons used exclusively for the fueling of implements of husbandry.

(2) Any container having a capacity less than 2,000 gallons installed prior to promulgation of this section.

(3) Transfers made to storage tanks equipped with floating roofs or their equivalent.

(4) Any stationary container at any facility where the monthly average throughput (1/12 of the total throughput for the preceeding twelve months) exceeds 20,000 gallons per month and which is subject to Maryland regulation 10.03.39.04J(2)(e) (1) and (2).

(e) Every owner or operator of a stationary storage container or delivery vessel subject to this section shall comply with the following compliance schedule:

(1) June 1, 1974 - Submit to the Administrator a final control plan, which describes at a minimum the steps which will be taken by the source to achieve compliance with the provisions of paragraph (c) of this section.

(2) March 1, 1975 - Negotiate and sign all necessary contracts for emission control systems, or issue orders for the purchase of component parts to accomplish emission control.

(3) May 1, 1975 - Initiate on-site contruction or installation of emission control equipment.

(4) February 1, 1976 - Complete on-site contruction of installation of emission control equipment.

(5) May 31, 1977. Assure final compliance with the provisions of paragraph (c) of this section.

(6) Any owner or operator of sources subject to the compliance schedule in this paragraph shall certify to the Administrator, within 5 days after the deadline for each increment of progress, whether or not the required increment of progress has been met.

(f) Paragraph (e) of this section shall not apply:

(1) To a source which is presently in compliance with the provisions of paragraph (c) of this section and which has certified such compliance to the Administrator by June 1, 1974. The Administrator may request whatever supporting information he considers necessary for proper certification.

(2) To a source for which a compliance schedule is adopted by the State and approved by the Administrator.

(3) To a source whose owner or operator submits to the Administrator, by June 1, 1974, a proposed alternative schedule. No such schedule may provide for compliance after March 1, 1976. Any such schedule shall provide for certification to the Administrator, within 5 days after the deadline for each increment therein, as to whether or not that increment has been met. If promulgated by the Administrator, such schedule shall satisfy the requirements of this paragraph for the affected source.

(g) Nothing in this section shall preclude the Administrator from promulgating a separate schedule for any source to which the application of the compliance schedule in paragraph (e) of this section fails to satisfy the requirements of 51.15 (b) and (c) of this chapter.

(h) Any gasoline dispensing facility subject to this section which installs a storage tank after the effective date of this section shall comply with the requirements of paragraph (c) of this section by May 31, 1977, and prior to that date shall comply with paragraph (e) of this section as far as possible. Any facility subject to this section which installs a storage tank after May 31, 1977, shall comply with the requirements of paragraph (c) of this section at the time of installation.

(38 FR 33719, Dec. 6, 1973, as amended at 39 FR 4881, Feb. 8, 1974; 39 FR 41253, Nov. 26, 1974; 41 FR 26902, June 30, 1976; 41 FR 56643, Dec. 29, 1976; 42 FR 29004, June 7, 1977)

(51.16) 52.1087 Control of evaporative losses from the filling of vehicular tanks.

(a) "Gasoline" means any petroleum distillate having a Reid vapor pressure of 4 pounds or greater.

(b) This section is applicable in the Maryland portion of the National Capital Interstate AQCR.

(c) A person shall not transfer gasoline to an automotive fuel tank from a gasoline dispensing system unless the transfer is made through a fill nozzle designed to:

(1) Prevent discharge of hydrocarbon vapors to the atmosphere from

either the vehicle filler neck or dispensing nozzle;

(2) Direct vapor displaced from the automotive fuel tank to a system wherein at least 90 percent by weight of the organic compounds in displaced vapors are recovered; and

(3) Prevent automotive fuel tank overfills or spillage on fill nozzle disconnect.

(d) The system referred to in paragraph (c) of this section may consist of a vapor-tight return line from the fill nozzle-filler neck interface to the dispensing tank or to an adsorption , absorption, incineration, regrigeration-condensation system or its equivalent.

(e) Components of the systems required by 52.1086 may be used for compliance with paragraph (c) of this section.

(f) If it is demonstrated to the satisfaction of the Administrator that it is impractical to comply with the provisions of paragraph (c) of this section as a result of vehicle fill neck configuration, location, or other design features of a class of vehicles, the provisions of this section shall not apply to such vehicles. However, in no case shall such configuration exempt any gasoline dispensing facility from installing and using in the most effective manner a system required by paragraph (c) of this section.

(g) Every owner or operator of a gasoline dispensing system subject to this section shall comply with the following compliance schedule.

(1) January 1, 1975 - Submit to the Administrator a final control plan, which describes at a minimum the steps which will be taken by the source to achieve compliance with the provisions of paragraph (c) of this section.

(2) March 1, 1975 - Negotiate and sign all necessary contracts for emission control systems, or issue orders for the purchase of component parts to accomplish emission contol.

(3) May 1, 1975 - Initiate on-site construction or installation of emission control equipment.

(4) May 1, 1977 - Complete on-site contruction installation of emission control equipment or process modification.

(5) May 31, 1977 - Assure final compliance with the provisions of paragraph (c) of this section.

(6) Any owner or operator of sources subject to the compliance schedule in this paragraph shall certify to the Administrator, within 5 days after the deadline for each increment of progress, whether or not the required increment of progress has been met.

(h) Paragraph (g) of this section shall not apply:

(1) To a source which is presently in compliance with the provisions of paragraph (c) of this section and which has certified such compliance to the Administrator by January 1, 1975. The Administrator may request whatever supporting information he considers necessary for proper certification.

(2) To a source for which a compliance schedule is adopted by the State and approved by the Administrator.

(3) To a source whose owner or operator submits to the Administrator, by June 1, 1974, a proposed alternative schedule. No such schedule may provide for compliance after May 31, 1977. Any such schedule shall provide for certification to the Administrator, within 5 days after the deadline for each increment therein, as to whether or not that increment has been met. If promulgated by the Administrator, such schedule shall satisfy the requirements of this paragraph for the affected source.

(i) Nothing in this section shall preclude the Administrator from promulgating a separate schedule for any source to which the application of the compliance schedule in paragraph (g) of this section fails to satisfy the requirements of 51.15 (b) and (c) of this chapter.

(j) Any gasoline dispensing facility subject to this section which installs a gasoline dispensing system after the effective date of this section shall comply with the requirements of paragraph (c) of this section by May 31, 1977, and prior to that date shall comply with paragraph (g) of this section as far as possible. Any facility subject to this section which installs a gasoline dispensing system after May 31, 1977, shall comply with the requirements of paragraph (c) of this section at the time of installation.

(38 FR 33719, Dec. 6, 1973, as amended at 39 FR 4881, Feb. 8, 1974; 39 FR 21053, June 18, 1974)

Note: The compliance dates given in paragraphs (g)(1)-(3) above were deferred indefinitely at 40 FR 1127, Jan. 6, 1975.

(51.21) 52.1088 Control of dry cleaning solvent evaporation.

(a) Definitions:

(1) "Dry cleaning operation" means that process by which an organic solvent is used in the commercial cleaning of garments and other fabric materials.

(2) "Organic solvents" means organic materials, including diluents and thinners, which are liquids at standard conditions and which are used as dissolvers, viscosity reducers, or cleaning agents.

(3) "Photochemically reactive solvent" means any solvent with an aggregate of more than 20 percent of its total volume composed of the chemical compounds classified below or which exceeds any of the following individual percentage composition limitations, as applied to the total volume of solvent.

(i) A combination of hydrocarbons, alcohols, aldehydes, esters, ethers, or ketones having an olefinic or cyclo-olefinic type of unsaturation: 5 percent;

(ii) A combination of aromatic compounds with 8 or more carbon atoms to the molecule except ethylbenyenl: 8 percent;

(iii) A combination of ethylbenyene or ketones having branched hydrocarbon structures, trichloroethylene or toluene; 20 percent;

(b) This section is applicable to the Maryland portion of the National Capital Intrastate AQCR.

(c) No person shall operate a dry cleaning operation using other than perchloroethylene, 1,1,1-tricloroethane, or saturated halogenated hydrocarbons unless the uncontrolled organic emissions from such operation are reduced at least 35 percent; provided, that dry cleaning operations emitting less than 8 pounds per hour and less than 40 pounds per day of uncontrolled organic materials are exempt from the requirement of this section.

(d) If incineration is used as a control technique, 90 percent or more of the carbon in the organic emissions being incinerated must be oxidized to carbon dioxide.

(e) Any owner or operator of a source subject to this section shall achieve compliance with the requirements of paragraph (c) of this section by discontinuing the use of photochemically reactive solvents no later than January 31, 1974, or by controlling emissions as required by paragraphs (c) and (d) of this section no later than May 31, 1975.

(38 FR 33720, Dec. 6, 1973)

(12.0) 52.1089 Inspection and maintenance program.

(a) Definitions:

(1) "Inspection and maintenance program" means a program for reducing emissions from in-use vehicles through identifying vehicles that need emission control-related maintenance and requiring that such maintenance be performed.

(2) "Light-duty vehicle" means a gasoline-powered motor vehicle

rated at 6,000 lb. gross vehicle weight (GVW) or less.

(3) "Medium-duty vehicle" means a gasoline-powered motor vehicle rated at more than 6,000 lb. GVW and less than 10,000 lb. GVW.

(4) "Heavy-duty vehicle" means a gasoline-powered motor vehicle rated at 10,000 GVW or more.

(5) All other terms used in this section that are defined in Part 51, Appendix N, of this chapter are used herein with the meanings so defined.

(b) This section is applicable within the Maryland portion of the National Capital Interstate AQCR.

(c) The State of Maryland shall establish an inspection and maintenance program applicable to all light-duty, medium-duty, and heavy-duty vehicles registered in the area specified in paragraph (b) of this section that operate on public streets or highways over which it has ownership or control. The State may exempt any class or category of vehicles that the State finds is rarely used on public streets of highways (such as classic or antique vehicles). Under the program, the State shall:

(1) Inspect all light-duty, medium-duty, and heavy-duty motor vehicles at periodic intervals no more than 1 year apart,

(2) Apply inspection failure criteria consistent with the emission reductions claimed in the plan for the strategy.

(3) Ensure that failed vehicles receive the maintenance necessary to achieve compliance with the inspection standards and retest failed vehicles following maintenance.

(4) (Reserved)

(5) Begin the first inspection cycle by August 1, 1975, completing it by July 31, 1976.

(6) Designate an agency or agencies responsible for conducting, the inspection and maintenance program.

(d) After July 31, 1976, the State shall not register or allow to operate on public streets or highways any light-duty, medium-duty, or heavy-duty vehicle that does not comply with the applicable requirements of the program established under paragraph (c) of this section. This shall not apply to the initial registration of a new motor vehicle.

(e) After July 31, 1976, no owner of a light-duty, medium-duty, or heavy-duty vehicle shall operate or allow the operation of such vehicle that does not comply with the applicable requirements of the program established under paragraph (c) of this section. This shall not apply to the initial registration of a new motor vehicle.

(f) The State of Maryland shall submit, no later than February 1, 1974, a detailed compliance schedule showing the steps it will take to establish an inspection and maintenance program pursuant to paragraph (c) of this section.

(38 FR 33720, Dec. 6, 1973; 42 FR 30507, June 15, 1977)

(12.0) 52.1090 Bicycle lanes and bicycle storage facilities.

(a) Definitions:

(1) "Bicycle" means a two-wheel, non-motor powered vehicle.

(2) "Bicycle lane" means a route for the exclusive use of bicycles, either constructed specifically for that purpose or converted from an existed lane.

(3) "Bicycle parking facility" means any storage facility for bicycles, which allows bicycles to be locked securely.

(4) "Parking space" means the area allocated by a parking facility for the temporary storage of one automobile.

(5) "Parking facility" means a lot, garage, building, or portion thereof, in or on which motor vehicles are temporarily parked.

(b) This section shall be applicable in the State of Maryland portion of the National Capital Interstate Air Quality Control Region.

(c) On or before July 1, 1976, the State of Maryland shall establish a network of bicycle lanes linking residential areas with employment, educational, and commercial centers in accordance with the following requirements:

(1) The network shall contain no less than 60 miles of bicycle lanes in addition to any in existence as of November 20, 1973.

(2) Each bicycle lane shall at a minimum.

  (i) Be clearly marked by signs indicating that the lane is for the exclusive use of bicycles (and pedestrians, if necessary);

  (ii) Be separated from motor vehicle traffic by appropriate devices, such as physical barriers, pylons, or painted lines;

  (iii) Be regularly maintained and repaired;

  (iv) Be of a hard, smooth surface suitable for bicycles;

  (v) Be at least 5 feet wide for one-way traffic, or 8 feet wide for two-way traffic;

  (vi) If in a street used by motor vehicles, be a minimum of 8 feet wide whether one-way or two-way; and

  (vii) Be adequately lighted.

(3) Off-street bicycle lanes which are not reasonably suited for commuting to and from employment, educational, and commercial centers shall not be considered a part of this network.

(4) On or before October 1, 1974, the State of Maryland shall establish 25 percent of the total mileage of the bicycle lane network; on or before June 1, 1976, 100 percent of the total mileage shall be established.

(d) On or before June 1, 1974, the State of Maryland shall submit to the Administrator a comprehensive study of a bicycle lane and bicycle path network. The study shall include, but not be limited to the following:

(1) A bicycle user and potential user survey, which shall at a minimum determine:

  (i) For present bicycle riders, the origin, destination, frequency, travel time, and distance of bicycle trips;

  (ii) In high density employment areas, the present modes of transportation of employees and the potential modes of transportation, including the number of employees who would convert to the bicycle mode from other modes upon completion of the bicycle lane network described in paragraph (c) of this section.

(2) A determination of the feasibility and location of on-street lanes.

(3) A determination of the feasibility and location of off-street lanes.

(4) A determination of the special problems related to feeder lanes to bridges, on-bridge lanes, feeder lanes to METRO and railroad stations, and feeder lanes to fringe parking areas, and the means necessary to include such lanes in the bicycle lane network described in paragraph (c) of this section.

(5) A determination of the feasibility and location of various methods of safe bicycle parking.

(6) The study shall make provision for the receipt of public comments on any matter within the scope of the study, including the location of the bicycle lane network described in paragraph (c) of this section.

(e) By June 1, 1974, in addition to the comprehensive study required pursuant to paragraph (d) of this section, the State of Maryland shall submit to the Administrator a detailed compliance schedule showing the steps it will take to establish this network pursuant to paragraphs (c) and (g) of this section. The compliance schedule shall identify in detail the names of streets that will provide bicycle lanes and the location of any lanes to be contructed especially for bicycle use. It shall also include a statement indicating the source, amount, and adequacy of funds to be used in implementing this section, and the text of any needed statutory proposals and needed regulations which will be proposed for adoption.

(f) On or before October 1, 1974, the State of Maryland shall submit to the Administrator legally adopted regulations sufficient to implement and enforce all of the requirements of this section.

(g) On or before June 1, 1975, the State of Maryland shall require all owners and operators of parking facilities containing more than 50 parking spaces (including both free and commercial facilities) within the area specified in paragraph (b) of this section to provide spaces for the storage of bicycles in the following ratio: one automobile-sized parking space (with a bicycle parking facility) for the storage of bicycles for every 75 parking spaces for the storage of autos.

(1) Bicycle parking facilities shall be so located as to be safe from motor vehicle traffic and secure from theft. They shall be properly repaired and maintained.

(2) The METRO Subway System shall provide a sufficient number of safe and secure bicycle parking facilities at each station to meet the needs of its riders.

(3) All parking facilities owned, operated, or leased by the Federal Government shall be subject to this paragraph.

(4) Any owner or operator of a parking facility which charges a fee for the storage of motor vehicles shall store bicycles at a price per unit per hour which is no greater in relation to the cost of storing them than is the price of parking for a motor vehicle in relation to the cost of storing it. Unless the owner or operator makes an affirmative showing to the State of Maryland of different facts, and agrees to charge in conformity with that showing, the ratio in costs and prices shall be determined by the maximum number of bicycles that can be stored in a single standard-sized automobile parking space.

(38 FR 33721, Dec. 6, 1973)

(12.0) 52.1091 Medium-duty air/fuel control retrofit.

(a) Definitions:

(1) "Air/Fuel Control Retrofit" means a system or device (such as modification to the engine's carburetor or positive crankcase ventilation system) that results in engine operation at an increased air/fuel ratio so as to achieve reduction in exhaust emissions of hydrocarbons and carbon monoxide from 1973 and earlier medium-duty vehicles of at least 15 and 30 percent, respectively.

(2) "Medium-duty vehicle" means a gasoline powered motor vehicle rated at more than 6,000 lb. GVW and less than 10,000 lb. GVW.

(3) All other terms used in this section that are defined in Part 51, Appendix N, of this chapter are used herein with meanings so defined.

(b) This section is applicable within the Maryland portion of the National Capital Interstate AQCR.

(c) The State of Maryland shall establish a retrofit program to ensure that on or before May 31, 1976, all medium-duty vehicles of model years prior to 1973 which are not required to be retrofitted with an oxidizing catalyst or other approved device pursuant to 52.1093 of this chapter, which are registered in the area specified in paragraph (b) of this section, are equipped with an appropriate air/fuel control device or other device as approved by the Administrator that will reduce exhaust emissions of hydrocarbons and carbon monoxide to the same extent as an air/fuel control device. No later than February 1, 1974, the State of Maryland shall submit to the Administrator a detailed compliance schedule showing the steps it will take to establish and enforce a retrofit program pursuant to this section, including the text of statutory proposals, regulations, and enforcement procedures that the State proposes for adoption. The compliance schedule shall also include a date by which the State shall evaluate and approve devices for use in this program. Such date shall be no later than September 30, 1974.

(d) No later than April 1, 1974, the State shall submit legally adopted regulations to the Administrator establishing such a program. The regulations shall include:

(1) Designation of an agency responsible for evaluating and approving devices for use on vehicles subject to this section.

(2) Designation of an agency responsible for ensuring that the provisions of paragraph (d)(3) of this section are enforced.

(3) Provisions for beginning the installation of the retrofit devices by August 1, 1975, and completing the installation of the devices on all vehicles subject to this section no later than May 31, 1976.

(4) A provision that no later than May 31, 1976, no vehicle for which retrofit is required under this section shall pass the annual emission tests provided for by 52.1089 unless it has been first equipped with an approved air/fuel control device, or other device approved pursuant to this section, which the test has shown to be installed and operating correctly. The regulations shall include test procedures and failure criteria for implementing this provision.

(5) Methods and procedures for ensuring that those persons installing the retrofit devices have the training and ability to perform the needed tasks satisfactorily and have an adequate supply of retrofit components.

(6) Provision (apart from the requirements of any general program for periodic inspection and maintenance of vehicles) for emissions testing at the time of device installation or some other positive assurance that the device is installed and operating correctly.

(e) After May 31, 1976, the State shall not register or allow to operate on its streets or highways any vehicle that does not comply with the applicable standards and procedures adopted pursuant to paragraph (d) of this section.

(f) After May 31, 1976, no owner of a vehicle subject to this section shall operate or allow the operation of any such vehicle that does not comply with the applicable standards and procedures implemented by this section.

(g) The State may exempt any class or category of vehicles from this section which the State finds is rarely used on public streets and highways (such as classic or antique vehicles) or for which the State demonstrates to the Administrator that air/fuel control devices or other devices approved pursuant to this section are not commercially available.

(38 FR 33721, Dec. 6, 1973)

(12.0) 52.1092 Heavy-duty air/fuel control retrofit.

(a) Definitions:

(1) "Air/Fuel Control Retrofit" means a system or device (such as modification to the engine's carburetor or positive crankcase ventilation system) that results in engine operation at an increased air-fuel ratio so as to achieve reduction in exhaust emissions of hydrocarbon and carbon monoxide from heavy-duty vehicles of at least 30 and 40 percent, respectively.

(2) "Heavy-duty vehicle" means a gasoline-powered motor vehicle rated at 10,000 lb. gross vehicle weight (GVW) or more.

(3) All other terms used in this section that are defined in Part 51, Appendix N, are used herein with meanings so defined.

(b) This section is applicable within the Maryland portion of the National Capital Interstate AQCR.

(c) The State of Maryland shall establish a retrofit program to ensure that on or before May 31, 1977, all heavy-duty vehicles registered in the areas specified in paragraph (b) of this section are equipped with an appropriate air/fuel control retrofit or other device as approved by the Administrator that will reduce exhaust emissions of hydrocarbons and carbon monoxide at least to the same extent as an air/fuel control retrofit. No later than April 1, 1974, the State of Maryland shall submit to the Administrator a detailed compliance schedule showing the steps it will take to establish and enforce a retrofit program pursuant to this section, including the text of statutory proposals, regulations, and enforcement procedures that the State proposes for adoption. The compliance schedule shall also include a date by which the State shall evaluate and approve devices for use in this program. Such date shall be no later than January 1, 1975.

(d) No later than September 1, 1974, the State shall submit legally adopted regulations to the Administrator establishing such a program. The regulations shall include:

(1) Designation of an agency responsible for evaluating and approving devices for use on vehicles subject to this section.

(2) Designation of an agency responsible for ensuring that the provisions of paragraph (d)(3) of this section are enforced.

(3) Provisions for beginning the installation of the retrofit devices by January 1, 1976, and completing the installation of the device on all vehicles subject to this section no later than May 31, 1977.

(4) A provision that starting no later than May 31, 1977, no vehicle for which retrofit is required under this section shall pass the annual emission tests provided for by 52.1089 unless it has been first equipped with an approved air/fuel control retrofit, or other device approved pursuant to this section, which the test has shown to be installed and operating correctly. The regulations shall include test procedures and failure criteria for implementing this provision.

(5) Methods and procedures for ensuring that those installing the retrofit devices have the training and ability to perform the needed tasks satisfactorily and have an adequate supply of retrofit components.

(6) Provision (apart from the requirements of any general program for periodic inspection and maintenance of vehicles) for emissions testing at the time of device installation or some other positive assurance that the device is installed and operating correctly.

(e) After May 31, 1977, the State shall not register or allow to operate on its streets or highways any vehicle that does not comply with the applicable standards and procedures adopted pursuant to paragraph (d) of this section.

(f) After May 31, 1977, no owner of a vehicle subject to this section shall operate or allow the operation of any such vehicle that does not comply with the applicable standards and procedures implementing this section.

(g) The State may exempt any class or category of vehicles from this section which the State finds is rarely used on public streets and highways (such as classic or antique vehicles) or for which the State demonstrates to the Administrator that air/fuel control retrofits or other devices approved pursuant to this section are not commercially available.

(38 FR 33722, Dec. 6, 1973)

(12.0) 52.1093 Oxidizing catalyst retrofit.

(a) Definitions:

(1) "Oxidizing catalyst" means a device that uses a catalyst installed in the exhaust system of a vehicle (and if necessary includes an air pump) so as to achieve a reduction in exhaust emissions of hydrocarbon and carbon monoxide of at least 50 and 50 percent, respectively, from light duty vehicles of 1971 through 1975 model years, and of at least 50 and 50 percent, respectively, from medium-duty vehicles of 1971 through 1975 model years.

(2) "Light-duty vehicle" means a gasoline-powered motor vehicle rated at 6,000 lb. gross vehicle weight (GVW) or less.

(3) "Medium-duty vehicle" means a gasoline-powered motor vehicle rated at more than 6,000 lb. GVW and less than 10,000 lb. GVW.

(4) "Fleet vehicle" means any of 5 or more light duty vehicles operated by the same person(s), business, or governmental entity and used principally in connection with the same or related occupations or uses. This definition shall also include any taxicab (or other light duty vehicle-for-hire) owned by any individual or business.

(5) All other terms used in this section that are defined in Part 51, Appendix N, of this chapter are used herein within meanings so defined.

(b) This section is applicable within the Maryland portion of the National Capital Interstate AQCR.

(c) The State of Maryland shall establish a retrofit program to ensure that on or before May 31, 1977, all light-duty fleet vehicles of model years 1971 through 1975, and all medium-duty vehicles of model years 1971 through 1975 which are registered in the area specified in paragraph (b) of this section and are able to operate on 91 RON gasoline are equipped with an appropriate oxidizing catalyst retrofit device, or other device, as approved by the Administrator, that will reduce exhaust emissions of hydrocarbons and carbon monoxide to the same extent as an oxidizing catalyst retrofit device. No later than April 1, 1974, the State of Maryland shall submit to the Administrator a detailed compliance schedule showing the steps it will take to establish and enforce a retrofit program pursuant to this section, including the text of statutory proposals, regulations, and enforcement procedures that the State proposes for adoption. The compliance schedule shall also include a date by which the State shall evaluate and approve devices for use in this program. Such data shall be no later than January 1, 1975.

(d) No later than September 1, 1974, the State shall submit legally adopted regulations to the Administrator establishing such a program. The regulations shall include:

(1) Designation of an agency responsible for evaluating and approving

devices for use on vehicles subject to this section.

(2) Designation of an agency responsible for ensuring that the provisions of paragraph (d)(3) of this section are enforced.

(3) Provisions for beginning the installation of the retrofit devices by January 1, 1976, and for completing the installation of the devices on all vehicles subject to this section no later than May 31, 1977.

(4) A provision that starting no later than May 3, 1977, no vehicle for which retrofit is required under this section shall pass the annual emission tests provided for by 52.1089 unless it has been first equipped with an approved oxidizing catalyst device, or other device approved pursuant to this section, which the test has shown to be installed and operating correctly. The regulations shall include test procedures and failure criteria for implementing this provision.

(5) Methods and procedures for ensuring that those installing the retrofit devices have the training and ability to perform the needed tasks satisfactorily and have an adequate supply of retrofit components.

(6) Provision (apart from the requirements of any general program for periodic inspection and maintenance of vehicles) for emissions testing at the time of device installation, or some other positive assurance that the device is installed and operating correctly.

(e) After May 31, 1977, the State shall not register or allow to operate on its streets or highways any vehicle that does not comply with the applicable standards and procedures adopted pursuant to paragraph (d) of this section.

(f) After May 31, 1977, no owner of a vehicle subject to this section shall operate or allow the operation of any such vehicle that does not comply with the applicable standards and procedures implementing this section.

(g) Any vehicle which is manufactured equipped with an oxidizing catalyst, or which is certified to meet the original 1975 light duty vehicle emissions standards set forth in section 202(b)(1)(a) of the Clean Air Act of 1970 (without regard to any suspension of such standards) shall be exempt from the requirements of this section.

(38 FR 33722, Dec. 6, 1973)

(12.0) 52.1094 Vacuum spark advance disconnect retrofit.

(a) Definitions:

(1) "Vacuum spark advance disconnect retrofit" means a device or system installed on a motor vehicle that prevents the ignition vacuum advance from operating either when the vehicle's transmission is in the lower gears, or when the vehicle is traveling below a predetermined speed, so as to achieve reduction in exhaust emissions of hydrocarbon and carbon monoxide from 1967 and earlier light-duty vehicles of at least 25 and 9 percent, respectively.

(2) "Light-duty vehicle" means a gasoline-powered motor vehicle rated at 6,000 lb. gross vehicle weight (GVW) or less.

(3) All other terms used in this section that are defined in Part 51, Appendix N, of this chapter are used herein with meanings so defined.

(b) This section is applicable within the Maryland portion of the National Capital Interstate AQCR.

(c) The State of Maryland shall establish a retrofit program to ensure that on or before January 1, 1976, all light-duty vehicles of model years prior to 1968 registered in the area specified in paragraph (b) of this section are equipped with an appropriate vacuum spark advance disconnect retrofit device or other device, as approved by the Administrator, that will reduce exhaust emissions of hydrocarbons and carbon monoxide at least to the same extent as a vacuum spark advance disconnect retrofit. No later than February 1, 1974, the State of Maryland shall submit to the Administrator a detailed compliance schedule showing the steps it will take to establish and enforce a retrofit program pursuant to this section, including the text of statutory proposals, regulations, and enforcement procedures that the State proposes for adoption. The compliance schedule shall also include a date by which the State shall evaluate and approve devices for use in this program. Such date shall be no later than September 30, 1974.

(d) No later than April 1, 1974, the State shall submit legally adopted regulations to the Administrator establishing such a program. The regulations shall include:

(1) Designation of an agency responsible for evaluating and approving devices for use on vehicles subject to this section.

(2) Designation of an agency responsible for ensuring that the provisions of paragraph (d)(3) of this section are enforced.

(3) Provisions for beginning the installation of the retrofit devices by January 1, 1975, and completing the installation of the devices on all vehicles subject to this section no later than January 1, 1976.

(4) A provision that starting no later than January 1, 1976, no vehicle for which retrofit is required under this section shall pass the annual emission tests provided for 52.1089 unless it has been first equipped with an approved vacuum spark advance disconnect retrofit device, or other device approved pursuant to this section, which the test has shown to be installed and operating correctly. The regulations shall include test procedures and failure criteria for implementing this provision.

(5) Methods and procedures for ensuring that those installing the retrofit devices have the training and ability to perform the needed tasks satisfactorily and have an adequate supply of retrofit components.

(6) Provision (apart from the requirements of any general program for periodic inspection and maintenance of vehicles) for emissions testing at the time of device installation or some other positive assurance that the device is installed and operating correctly.

(e) After January 1, 1976, the State shall not register or allow to operate on its streets or highways and light-duty vehicle that does not comply with the applicable standards and procedures adopted pursuant to paragraph (d) of this section.

(f) After January 1, 1976, no owner of a vehicle subject to this section shall operate or allow the operation of any such vehicle that does not comply with the applicable standards and procedures implementing this section.

(g) The State may exempt any class or category of vehicles from this section which the State finds is rarely used on public streets and highways (such as classic or antique vehicles) or for which the State demonstrates to the Administrator that vacuum spark advance disconnect devices or other devices approved pursuant to this section are not commercially available.

(38 FR 33723, Dec. 6, 1973)

(12.0) 52.1095 Inspection and maintenance program.

(a) Definitions:

(1) "Inspection and maintenance program" means a program for reducing emissions from in-use vehicles through identifying vehicles that need emission control-related maintenance and requiring that such maintenance be performed.

(2) "Light-duty vehicle" means a gasoline-powered motor vehicle rated at 6,000 lb. gross vehicle weight (GVW) or less.

(3) "Medium-duty vehicle" means a gasoline-powered motor vehicle rated at more than 6,000 lb. GVW and less than 10,000 lb. GVW.

(4) "Heavy-duty vehicle" means a gasoline-powered motor vehicle rated at 10,000 GVW or more.

(5) All other terms used in this section that are defined in Part 51, Appendix N, of this chapter are used herein with the meanings so defined.

(b) This section is applicable within the Metropolitan Baltimore Intrastate AQCR.

(c) The State of Maryland shall establish an inspection and maintenance program applicable to all light-duty, medium-duty, and heavy-duty vehicles registered in the area specified in paragraph (b) of this section that operate on public streets or highways over which it has ownership or control. The State may exempt any class or category of vehicles that the State finds is rarely used on public streets or highways (such as classic or antique vehicles). Under the program, the State shall:

(1) Inspect all light-duty, medium-duty, and heavy-duty motor vehicles at periodic intervals no more than 1 year apart.

(2) Apply inspection failure criteria consistent with the emission reductions claimed in the plan for the strategy.

(3) Ensure that failed vehicles receive the maintenance necessary to achieve compliance with the inspection standards and retest failed vehicles following maintenance.

(4) (Reserved)

(5) Begin the first inspection cycle by August 1, 1975, completing it by July 31, 1976.

(6) Designate an agency or agencies responsible for conducting the inspection and maintenance program.

(d) After July 31, 1976, the State shall not register or allow to operate on public streets or highways any light-duty, medium-duty, or heavy-duty vehicle that does not comply with the applicable requirements of the program established under paragraph (c) of this section. This shall not apply to the initial registration of a new motor vehicle.

(e) After July 31, 1976, no owner of a light-duty, medium-duty, or heavy-duty vehicle shall operate or allow the operation of such vehicle shall operate or allow the operation of such vehicle that does not comply with the applicable requirements of the program established under paragraph (c) of this section. This shall not apply to the initial registration of a new motor vehicle.

(f) The State of Maryland shall submit, no later than February 1, 1974, a detailed compliance schedule showing the steps it will take to establish an inspection and maintenance program pursuant to paragraph (c) of this section.

(38 FR 34249, Dec. 12, 1973; 42 FR 30508, June 15, 1977)

(12.0) 52.1096 Vacuum spark advance disconnect retrofit.

(a) Definitions:

(1) "Vacuum spark advance disconnect retrofit" means a device or system installed on a motor vehicle that prevents the ignition vacuum advance from operating either when the vehicle's transmission is in the lower gears, or when the vehicle is traveling below a predetermined speed, so as to achieve reduction in exhaust emissions of hydrocarbon and carbon monoxide of at least 25 and 9 percent, respectively, from 1967 and earlier light-duty vehicles.

(2) "Light-duty vehicle" means a gasoline-powered motor vehicle rated at 6,000 lb. gross vehicle weight (GVW) or less.

(3) All other terms used in this section that are defined in Part 51, Appendix N, of this chapter are used herein with meanings so defined.

(b) This section is applicable within the Metropolitan Baltimore Intrastate AQCR.

(c) The State of Maryland shall establish a retrofit program to ensure that on or before January 1, 1976, all light-duty vehicles of model years prior to 1968 registered in the area specified in paragraph (b) of this section are equipped with an appropriate vacuum spark advance disconnect retrofit device or other device, as approved by the Administrator, that will reduce exhaust emissions of hydrocarbons and carbon monoxide at least to the same extent as a vacuum spark advance disconnect retrofit. No later than February 1, 1974, the State of Maryland shall submit to the Administrator a detailed compliance schedule showing the steps it will take to establish and enforce a retrofit program pursuant to this section, including the text of statutory proposals, regulations, and enforcement procedures that the State proposed for adoption. The compliance schedule shall also include a date by which the State shall evaluate and approve devices for use in this program. Such date shall be no later than September 30, 1974.

(d) No later than April 1, 1974, the State shall submit legally adopted regulations to the Administrator establishing such a program. The regulations shall include:

(1) Designation of an agency responsible for evaluating and approving devices for use on vehicles subject to this section.

(2) Designation of an agency responsible for ensuring that the provisions of subparagraph (3) of this paragraph are enforced.

(3) Provisions for beginning the installation of the retrofit devices by January 1, 1975, and completing the installation of the devices on all vehicles subject to this section no later than January 1, 1976.

(4) A provision that starting no later than January 1, 1976, no vehicle for which retrofit is required under this section shall pass the annual emission tests provided for by 52.1095 unless it has been first equipped with an approved vacuum spark advance disconnect retrofit device, or other device approved pursuant to this section, which the test has shown to be installed and operating correctly. The regulations shall include test procedures and failure criteria for implementing this provision.

(5) Methods and procedures for ensuring that those installing the retrofit devices have the training and ability to perform the needed tasks satisfactorily and have an adequate supply of retrofit components.

(6) Provision (apart from the requirements of any general program for periodic inspection and maintenance of vehicles) for emissions testing at the time of device installation or some other positive assurance that the device is installed and operating correctly.

(e) After January 1, 1976, the State shall not register or allow to operate on its streets of highways any light-duty vehicle that does not comply with the applicable standards and procedures adopted pursuant to paragraph (d) of this section.

(f) After January 1, 1976, no owner of a vehicle subject to this section shall operate or allow the operation of any such vehicle that does not comply with the applicable standards and procedures implementing this section.

(g) The State may exempt any class or category of vehicles from this section which the State finds is rarely used on public streets and highways (such as classic or antique vehicles) or for which the State demonstrates to the Administrator that vacuum spark advance disconnect devices or other devices approved pursuant to this section are not commercially available.

(38 FR 34249, Dec. 12, 1973)

(12.0) 52.1097 Oxidizing catalyst retrofit - Baltimore.

(a) Definitions:

(1) "Oxidizing catalyst" means a device that uses a catalyst installed in the exhaust system of a vehicle (and if necessary, includes an air pump) so as to achieve reduction in exhaust emissions of hydrocarbon and carbon monoxide of at least 50 and 50 percent, respectively, from light-duty vehicles of 1971-1975 model years and of least 50 and 50 percent, respectively, from medium-duty vehicles of 1971-1975 model years.

(2) "Light-duty vehicle" means a gasoline-powered motor vehicle rated at 6,000 lb. gross vehicle weight (GVW) or less.

(3) "Medium-duty vehicle" means a gasoline-powered motor vehicle rated at more than 6,000 lb. GVW and less than 10,000 lb. GVW.

(4) All other terms used in this section that are defined in Part 51, Appendix N, of this chapter are used herein with meanings so defined.

(b) This section is applicable within the Metropolitan Baltimore Intrastate AQCR.

(c) The State of Maryland shall establish a retrofit progarm to ensure that on or before May 31, 1977, all light-duty and medium-duty vehicles of model years 1971 through 1975 which are registered in the area specified in paragraph (b) of this section and are able to operate 91 RON gasoline, are equipped with an appropriate oxidizing catalyst retrofit device. No later than April 1, 1974, the State of Maryland shall submit to the Administrator a detailed compliance schedule showing the steps it will take to establish and enforce a retrofit program pursuant to this section, including the text of statutory proposals, regulations, and enforecement procedures that the State proposes for adoption. The compliance schedule shall also include a date by which the State shall evaluate and approve devices for use in this program. Such date shall be no later than January 1, 1975.

(d) No later than September 1, 1974, the State shall submit legally adopted regulations to the Administrator establishing such a program. The regulations shall include:

(1) Designation of an agency responsible for evaluating and approving devices for use on vehicles subject to this section.

(2) Designation of an agency reponsible for ensuring that the provisions of subparagraph (3) of this paragraph are enforced.

(3) Provisions for beginning the installation of the retrofit devices by January 1, 1976, and completing the installation of the devices on all vehicles subject to this section no later than May 31, 1977.

(4) A provision that starting no later than May 31, 1977, no vehicle for which retrofit is required under this section shall pass the annual emissions tests provided by 52.1095 unless it has been first equipped with an approved oxidizing catalyst device, or other device approved pursuant to this section, which the test has shown to be installed and operating correctly. The regulations shall include test procedures and failure criteria for implementing this provision.

(5) Methods and procedures for ensuring that those installing the retrofit device have the training and ability to perform the needed tasks satisfactorily and have an adequate supply of retrofit components.

(6) Provision (apart from the requirements of any general program for periodic inspection and maintenance of vehicles) for emissions testing at the time of device installation or some other positive assurance that the device is installed and operating correctly.

(e) After May 31, 1977, the State shall not register or allow to operate on its streets or highways any vehicle that does not comply with the applicable standards and procedures adopted pursuant to paragraph (d) of this section.

(f) After May 31, 1977, no owner of a vehicle subject to this section shall operate or allow the operation of any such vehicle that does not comply with the applicable standards and procedures implementing this section.

(g) Any vehicle which is manufactured equipped with an oxidizing catalyst, or which is certified to meet the original 1975 light-duty vehicle emission standards set forth in section 202 (b)(1)(A) of the Clean Air Act of 1970 (without regard to any suspension of such standards), shall be exempt from the requirements of this section.

(38 FR 34250, Dec. 12, 1973)

(12.0) 52.1098 Light-duty air/fuel control retrofit.

(a) Definitions:

(1) "Air-Fuel control retrofit" means a system or device (such as modification to the engine's carburetor or positive crankcase ventilation system) that results in engine operation at an increased air-fuel ratio so as to achieve reduction in exhaust emissions of hydrocarbons and carbon monoxide of at least 25 and 40 percent, respectively, from 1968 through 1971 model year light-duty vehicles.

(2) "Light-duty vehicle" means a gasoline-powered motor vehicle rated at 6,000 lb. gross vehicle weight (GVW) or less.

(3) All other terms used in this section that are defined in Part 51, Appendix N, of this chapter are used herein with meanings so defined.

(b) This section is applicable within the Metropolitan Baltimore Intrastate AQCR.

(c) The State of Maryland shall establish a retrofit program to ensure that on or before August 1, 1976, all light-duty vehicles of 1968-1971 model years which are not required to be retrofitted with an oxidizing catalyst or other approved device pursuant to 52.1097, which are registered in the area specified in paragraph (b) of this section are equipped with an appropriated air/fuel control device or other device as approved by the Administrator that will reduce exhaust emissions of hydrocarbons and carbon monoxide at least to the same extent as an air/fuel control device. No later than February 1, 1974, the State of Maryland shall submit to the Administrator a detailed compliance schedule showing the steps it will take to establish and enforce a retrofit program pursuant to this section, including the text of statutory proposals, regulations, and enforcement procedures that the State proposes for adoption. The compliance schedule shall also include a date by which the State shall evaluate and approve devices for use in this program. Such date shall be no later than September 30, 1974.

(d) No later than April 1, 1974, the State shall submit legally adopted regulations to the Administrator establishing such a program. The regulations shall include:

(1) Designation of an agency responsible for evaluating and approving devices for use on vehicles subject to this section.

(2) Designation of an agency responsible for ensuring that the provisions of subparagraph (3) of this paragraph are enforced.

(3) Provisions for beginning the installation of the retrofit devices by August 1, 1975, and completing the installation of the devices on all vehicles subject to this section no later than August 1, 1976.

(4) A provision that starting no later than August 1, 1976, no vehicle for which retrofit is required under this section shall pass the annual emission tests provided for by 52.1095 unless it has been first equipped with an approved air/fuel control retrofit, or other device approved pursuant to this section, which the test has shown to be installed and operating correctly. The regulations shall include test procedures and failure criteria for implementing this provision.

(5) Methods and procedures for ensuring that those installing the retrofit devices have the training and ability to perform the needed tasks satisfactorily and have an adequate supply of retrofit components.

(6) Provision (apart from the requirements of any general program for periodic inspection and maintenance of vehicles) for emissions testing at the time of device installation or some other positive assurance that the device is installed and operating correctly.

(e) After August 1, 1976, the State shall not register or allow to operate on its streets or highways any vehicle that does not comply with the applicable standards and procedures adopted pursuant to paragraph (d) of this section.

(f) After August 1, 1976, no owner of a vehicle subject to this section shall operate or allow the operation of any such vehicle that does not comply with the applicable standards and procedures implementing this section.

(g) The State may exempt any class or category of vehicles from this section which the State finds is rarely used on public streets and highways (such as classic or antique vehicles) or for which the State demonstrates to the Administrator that air/fuel control devices or other devices approved pursuant to this section are not commercially available.

(38 FE 34250, Dec. 12, 1973)

2.0) 52.1099 Medium-duty air/fuel control retrofit.

(a) Definitions:

(1) "Air/fuel control retrofit" means a system or device (such as modification to the engine's carburetor or positive crankcase ventilation system) that results in engine operation at an increased air/fuel ratio so as to achieve reduction in exhaust emissions of hydrocarbons and carbon monoxide of at least 15 and 30 percent, respectively, from 1973 and earlier medium-duty vehicles.

(2) "Medium-duty vehicle" means a gasoline-powered motor vehicle rated at more than 6,000 lb. GVW and less than 10,000 lb. GVW.

(3) All other terms used in this section that are defined in Part 51, Appendix N, of this chapter are used herein with meanings so defined.

(b) This section is applicable within the Metropolitan Baltimore Intrastate AQCR.

(c) The State of Maryland shall establish a retrofit program to ensure that on or before May 31, 1976, all medium-duty vehicles of model years prior to 1974 which are not required to be retrofitted with an oxidizing catalyst or other approved device pursuant to 52.1097, which are registered in the area specified in paragraph (b) of this section, are equipped with an appropriate air/fuel control device or other device as approved by the Administrator that will reduce exhaust emissions of hydrocarbons and carbon monoxide to the same extent as an air/fuel control device. No later than February 1, 1974, State of Maryland shall submit to the Administrator a detailed compliance schedule showing the steps it will take to establish and enforce a retrofit program pursuant to this section, including the text of statutory proposals, regulations, and enforcement procedures that the State proposes for adoption. The compliance schedule shall also include a date by which the State shall evaluate and approve devices for use in this program. Such date shall be no later than September 30, 1974.

(d) No later than April 1, 1974, the State shall submit legally adopted regulations to the Administrator establishing such a program. The regulations shall include:

(1) Designation of an agency responsible for evaluating and approving devices for use on vehicles subject to this section.

(2) Designation of an agency responsible for ensuring that the provisions of subparagraph (3) of this paragraph are enforced.

(3) Provisions for beginning the installation of the retrofit devices by August 1, 1975, and completing the installation of

the devices on all vehicles subject to this section no later than May 31, 1976.

(4) A provision that beginning no later than May 31, 1976, no vehicle for which retrofit is required under this section shall pass the annual emission test provided for by 52.1095 unless it has been first equipped with an approved air/fuel control retrofit, or other device approved pursuant to this section, which the test has shown to be installed and operating correctly. The regulations shall include test procedures and failure criteria for implementing this provision.

(5) Methods and procedures for ensuring that those persons installing the retrofit devices have the training and ability to perform the needed tasks satisfactorily and have an adequate supply of retrofit components.

(6) Provision (apart from the requirements of any general program for periodic inspection and maintenance of vehicles) for emissions testing at the time of device installation or some other positive assurance that the device is installed and operating correctly.

(e) After May 31, 1976, the State shall not register or allow to operate on its streets or highways any vehicle that does not comply with the applicable standards and procedures adopted pursuant to paragraph (d) of this section.

(f) After May 31, 1976, no owner of a vehicle subject to this section shall operate or allow the operation of any such vehicle that does not comply with the applicable standards and procedures implementing this section.

(g) The State may exempt any class or category of vehicles from this section which the State finds is rarely used on public streets and highways (such as classic or antique vehicles) or for which the State demonstrates to the Administrator that air/fuel control devices or other devices approved pursuant to this section are not commercially available.

(38 FR 34251, Dec. 12, 1973)

(12.0) 52.1100 Heavy-duty air/fuel control retrofit.

(a) Definitions:

(1) "Air/fuel control retrofit" means a system or device (such as modification to the engine's carburetor or positive crankcase ventilation system) that results in engine operation at an increased air-fuel ratio so as to achieve reduction in exhaust emissions of hydrocarbon and carbon monoxide from heavy-

duty vehicles of at least 30 and 40 percent, respectively.

(2) "Heavy-duty vehicles" means a gasoline-powered motor vehicle rated at 10,000 lb. gross vehicle weight (GVW) or more.

(3) All other terms used in this section that are defined in Part 51, Appendix N, of this chapter are used herein with meanings so defined.

(b) This section is applicable within the Metroplitan Baltimore Intrastate AQCR.

(c) The State of Maryland shall establish a retrofit program to ensure that on or before May 31, 1977, all heavy-duty vehicles registered in the area specified in paragraph (b) of this section are equipped with an appropriate air/fuel control retrofit or other device as approved by the Administrator that will reduce exhaust emissions of hydrocarbons and carbon monoxide at least to the same extent as an air/fuel control retrofit. No later than April 1, 1974, the State of Maryland shall submit to the Administrator a detailed compliance schedule showing the steps it will take to establish and enforce a retrofit program pursuant to this section, including the text of statutory proposals, regulations, and enforcement procedures that the State proposes for adoption. The compliance schedule shall also include a date by which the State shall evaluate and approve devices for use in this program. Such date shall be no later than January 1, 1975.

(d) No later than September 1, 1974, the State shall submit legally adopted regulations to the Administrator establishing such a program. The regulations shall include:

(1) Designation of an agency responsible for evaluation and approving devices for use on vehicles subject to this section.

(2) Designation of an agency responsible for ensuring that the provisions of subparagraph (3) of this paragraph are enforced.

(3) Provisions for beginning the installation of the retrofit devices by January 1, 1976, and completing the installation of the device on all vehicles subject to this section no later than May 31, 1977.

(4) A provision that starting no later than May 31, 1977, no vehicle for which retrofit is required under this section shall pass the annual emission tests provided for by 52.1095 unless it has been first equipped with an approved air/fuel control retrofit, or other device approved pursuant to this section, which the test has shown to be installed and operating correctly. The regulations shall include test procedures and

failure criteria for implementing this provision.

(5) Methods and procedures for ensuring that those installing the retrofit devices have the training and ability to perform the needed tasks satisfactorily and have an adequate supply of retrofit components.

(6) Provision (apart from the requirements of any general program for periodic inspection and maintenance of vehicles) for emissions testing at the time of device installation or some other positive assurance that the device is installed and operating correctly.

(e) After May 31, 1977, the State shall not register or allow to operate on its streets or highways any vehicle that does not comply with the applicable standards and procedures adopted pursuant to paragraph (d) of this section.

(f) After May 31, 1977, no owner of a vehicle subject to this section shall operate or allow the operation of any such vehicle that does not comply with the applicable standards and procedures implementing this section.

(g) The State may exempt any class or category of vehicles from this section which the State finds is rarely used on public streets and highways (such as classic or antique vehicles) or for which the State demonstrates to the Administrator that air/fuel control retrofits or other devices approved pursuant to this section are not commercially available.

(51.16) 52.1101 Gasoline transfer vapor control.

(a) Definitions:

(1) "Gasoline" means any petroleum distillate having a Reid vapor pressure of 4 pounds or greater.

(b) This section is applicable in the Metroplitan Baltimore Intrastate AQCR.

(c) No person shall transfer gasoline from any delivery vessel into any stationary storage container with a capacity greater than 250 gallons unless the displaced vapors from the storage container are processed by a system that prevents release to the atmosphere of no less than 90 percent by weight of organic compounds in said vapors displaced from the stationary container location.

(1) The vapor recovery portion of the system shall include one or more of the following:

(i) A vapor-tight return line from the storage container to the delivery vessel and a system that will ensure that the vapor return line is connected before gasoline can be transferred into the container.

(ii) Refrigeration - condensation system or equivalent designed to recover no less than 90 percent by weight of the organic compounds in the displaced vapor.

(2) If a "vapor-tight vapor return" system is used to meet the requirements of this section, the system shall be so contructed as to be readily adapted to retrofit with an adsorption system, or equivalent vapor removal system, and so constructed as to anticipate compliance with 52.1102.

(3) The vapor-laden delivery vessel shall be subject to the following conditions:

(i) The delivery vessel must be so designed and maintained as to be vapor-tight at all times.

(ii) The vapor-laden delivery vessel may be refilled only at facilities equipped with a vapor recovery system or the equivalent, which can recover at least 90 percent by weight of the organic compounds in the vapors displaced from the delivery vessel during refilling.

(iii) Gasoline storage compartments of 1,000 gallons or less in gasoline delivery vehicles presently in use on the promulgation date of this regulation will not be required to be retrofitted with a vapor return system until January 1, 1977.

(iv) Facilities which have an annual average throughput of 20,000 gallons of gasoline or less are required to have a vapor recovery system in operation no later than May 31, 1977, also are required to meet the provisions of this section no later than May 31, 1977.

(d) The provisions of paragraph (c) of this section shall not apply to the following:

(1) Stationary containers having a capacity less than 550 gallons used exclusively for the fueling of implements of husbandry.

(2) Any container having a capacity less than 2,000 gallons installed prior to promulgation of this section.

(3) Transfers made to storage tanks equipped with floating roofs

or their equivalent.

(4) Any stationary container at any facility where the monthly average throughput (1/12 of the total throughput for the preceding twelve months) exceeds 20,000 gallons per month and which is subject to Maryland regulation 10.03.38.04J(2)(e)(1) and (2).

(e) Every owner or operator of a stationary storage container or delivery vessel subject to this section shall comply with the following compliance schedule:

(1) June 1, 1974. Submit to the Administrator a final control plan, which describes at a minimum the steps which will be taken by the source to achieve compliance with the provisions of paragraph (c) of this section.

(2) March 1, 1976. Negotiate and sign all necessary contracts for emission control systems, or issue orders for the purchase of component parts to accomplish emission control.

(3) May 1, 1975. Initiate on-site construction or installation of emission control equipment.

(4) February 1, 1976. Complete on-site construction or installation of emission control equipment.

(5) May 31, 1977. Assure final compliance with the provisions of paragraph (c) of this section.

(6) Any owner or operator of sources subject to the compliance schedule in this paragraph shall certify to the Administrator, within 5 days after the deadline for each increment of progress, whether or not the required increment of progress has been met.

(f) Paragraph (e) of this section shall not apply:

(1) To a source which is presently in compliance with the provisions of paragraph (c) of this section and which has certified such compliance to the Administrator by June 1, 1974. The Administrator may request whatever supporting information he considers necessary for proper certification.

(2) To a source for which a compliance schedule is adopted by the State and approved by the Administrator.

(3) To a source whose owner or operator submits to the Administrator, by June 1, 1974, a proposed alternative schedule. No such schedule may provide for compliance after March 1, 1976. Any such schedule shall provide for certification to the

Administrator within 5 days after the deadline for each increment therein, as to whether or not that increment has been met. If promulgated by the Administrator, such schedule shall satisfy the requirements of this paragraph for the affected source.

(g) Nothing in this section shall preclude the Administrator from promulgating a separate schedule for any source to which the application of the compliance schedule in paragraph (e) of this section fails to satisfy the requirements of 51.15 (b) and (c) of this chapter.

(h) Any gasoline dispensing facility subject to this section which installs a storage tank after the effective date of this section shall comply with the requirements of paragraph (c) of this section by May 31, 1977, and prior to that date shall comply with paragraph (e) of this section as far as possible. Any facility subject to this section which installs a storage tank after May 31, 1977, shall comply with the requirements of paragraph (c) of this section at the time of installation.

(38 Fr 34252, Dec. 12, 1973, as amended at 39 FR 4881, Feb. 8, 1974; 39 FR 41253, Nov. 26, 1974; 41 FR 26902, June 30, 1976)

'.16) 52.1102 Control of evaporative losses from the filling of vehicular tanks.

(a) Definitions:

(1) "Gasoline" means any petroleum distillate having a Reid vapor pressure of 4 pounds or greater.

(b) This section is applicable in the Metropolitan Baltimore Intrastate AQCR.

(c) A person shall not transfer gasoline to an automotive fuel tank from a gasoline dispensing system unless the transfer is made through a fill nozzle designed to:

(1) Prevent discharge of hydrocarbon vapors to the atmosphere from either the vehicle filler neck or dispensing nozzle;

(2) Direct vapor displaced from the automotive fuel tank to a system wherein at least 90 percent by weight of the organic compounds in displaced vapors are recovered; and

(3) Prevent automotive fuel tank overfills or spillage on fill nozzle disconnect.

(d) The system referred to in paragraph (c) of this section can consist of a vapor-tight return line from the fill nozzle-filler neck interface to the dispensing tank or to an adsorption, absorption, incineration, refrigeration-condensation system or its equivalent.

(e) Components of the systems required by 52.1101 (c) can be used for compliance with paragraph (c) of this section.

(f) If it is demonstrated to the satisfaction of the Administrator that it is impractical to comply with the provisions of paragraph (c) of this section as a result of vehicle fill neck configuration, location, or other design features of a class of vehicles, the provisions of this section shall not apply to such vehicles. However, in no case shall such configuration exempt any gasoline dispensing facility from installing and using in the most effective manner a system required by paragraph (c) of this section.

(g) Every owner or operator of a gasoline dispensing system subject to this section shall comply with the following compliance schedule.

(1) January 1, 1975. Submit to the Administrator a final control plan, which describes at a minimum the steps which will be taken by the source to achieve compliance with provisions of paragraph (c) of this section.

(2) March 1, 1975. Negotiate and sign all necessary contracts for emission control systems, or issue orders for the purchase of component parts to accomplish emission control.

(3) May 1, 1975. Initiate on-site construction or installation of emission control equipment.

(4) May 1, 1977. Complete on-site construction or installation of emission control equipment or process modification.

(5) May 31, 1977. Assure final compliance with the provisions of paragraph (c) of this section.

(6) Any owner or operator of sources subject to the compliance schedule in this paragraph shall certify to the Administrator, within 5 days after the deadline for each increment of progress, whether or not the required increment of progress has been met.

(h) Paragraph (g) of this section shall not apply:

(1) To a source which is presently in compliance with the provisions of paragraph (c) of this section and which has certified such compliance to the Administrator by January 1, 1975. The Administrator may request whatever supporting information he considers necessary for proper certification.

(2) To a source for which a compliance schedule is adopted by the State and approved by the Administrator.

(3) To a source whoce owner or operator submits to the Administrator by June 1, 1974, a proposed alternative schedule. No such schedule may provide for compliance after May 31, 1977. Any such schedule shall provide for certification to the Administrator within 5 days after the deadline for each increment therein, as to whether or not that increment has been met. If promulgated by the Administrator, such schedule shall satisfy the requirements of this paragraph for the affected source.

(i) Nothing in this section shall preclude the Administrator from promulgating a separate schedule for any source to which the application of the compliance schedule in paragraph (g) of this section fails to satisfy the requirements of 51.15 (b) and (c) of this chapter.

(j) Any gasoline dispensing facility subject to this section which installs a gasoline dispensing system after the effective date of this section shall comply with the requirements of paragraph (c) of this section by May 31, 1977 and prior to that date shall comply with paragraph (g) of this section as far as possible. Any facility subject to this section which installs a gasoline dispensing system after May 31, 1977, shall comply with the requirements of paragraph (c) of this section at the time of installation.

(38 FR 34253, Dec. 12, 1973, as amended at 39 FR 4881, Feb. 8, 1974; 39 FR 21053, June 18, 1974)

Note: The compliance dates given in paragraphs (g) (1)-(3) were suspended indefinitely at 40 FR 1127, Jan. 6, 1975)

.2.0) 52.1103 Management of parking supply.

(a) Definitions:

All terms used in this section but not specifically defined below shall have the meaning given them in Part 51 of this chapter and this Part 52.

(1) "Parking facility" (also called "facility") means a lot, garage, building or structure, or combination or portion thereof, in or on which motor vehicles are temporarily parked.

(2) "Vehicle trip" means a single movement by a motor vehicle that originates or terminates at a parking facility.

(3) "Construction" means fabrication, erection, or installation of a parking facility, or any conversion of land, a building or structure, or portion thereof, for use as a facility.

(4) "Modification" means any change to a parking facility that increases or may increase the motor vehicle capacity of or the motor vehicle activity associated with such parking facility.

(5) "Commerce" means to undertake a continuous program of onsite construction or modification.

(b) This regulation is applicable in the Maryland portion of the National Capital Air Quality Control Region.

(c) The requirements of this section are applicable to the following parking facilities in the areas specified in paragraph (b) of this section, the contruction or modification of which is commenced after January 1, 1975.

(1) Any new parking facility with parking capacity 250 or more motor vehicles;

(2) Any parking facility that will be modified to increase parking capacity by 250 or more motor vehicles; and

(3) Any parking facility constructed or modified in increments which individually are not subject to review under this section, but which, when all such increments occuring since November 12, 1973, are added together, as a total would subject the facility to review under this section.

(d) No person shall commence construction or modification of any facility subject to this section without first obtaining written approval from the Administrator or an agency designated by him; provided, that this paragraph shall not apply to any proposed contruction or modification for which a general construction contract was finally executed by all appropriate parties on or before January 1, 1975.

(e) No approval to construct or modify a facility shall be granted unless the applicant shows to the satisfaction of the Administrator or agency approved by him that:

(1) The design or operation of the facility will not cause a violation of the control strategy which is part of the applicable implementation plan, and will be consistent with the plan's VMT reduction goals.

(2) The emissions resulting from the design or operation of the facility will not prevent or interfere with the attainment or maintenance of any national ambient air quality standard at any time within 10 years from the date of application.

(f) All applications for approval under this section shall include the following information:

(1) Name and address of the applicant.

(2) Location and description of the parking facility.

(3) A proposed contruction schedule.

(4) The normal hours of operation of the facility and the enterprises and activities that it serves.

(5) The total motor vehicle capacity before and after the construction or modification of the facility.

(6) The number of people using or engaging in any enterprises or activities that the facility will serve on a daily basis and a peak hour basis.

(7) A projection of the geographic areas in the community from which people and motor vehicles will be drawn to the facility. Such projection shall include data concerning the availability of mass transit from such areas.

(8) An estimate of the average and peak hour vehicle trip generation rates, before and after construction or modification of the facility.

(9) An estimate of the effect of the facility on traffic pattern and flow.

(10) An estimate of the effect of the facility on total VMT for the air quality control region.

(11) An analysis of the effect of the facility on site and regional

air quality, including a showing that the facility will be compatible with the applicable implementation plan, and that the facility will not cause any national air quality standard to be exceeded within 10 years from date of application. The Administrator may prescribe a standardized screening technique to be used in analyzing the effect of the facility on ambient air quality.

(12) Additional information, plans, specifications, or documents required by the Administrator.

(g) Each application shall be signed by the owner or operator of the facility, whose signature shall constitute an agreement that the facility shall be operated in accordance with the design submitted in the application and with applicable rules, regulations, and permit conditions.

(h) Within 30 days after receipt of an application, the Administrator or agency approved by him shall notify the public, by prominent advertisement in the Region affected of the receipt of the application and the proposed action on it (whether approval, conditional approval, or denial, and shall invite public comment.)

(1) The application, all submitted information, and the terms of the proposed action shall be made available to the public in a readily accessible place within the affected air quality region.

(2) Public comments submitted within 30 days of the date such information is made available shall be considered in making the final decision on the application.

(3) The Administrator or agency approved by him shall take final action (approval, conditional approval, or denial) on an application within 30 days after close of the public comment period.

(38 FR 31537, Nov. 15, 1973, as amended at 39 FR 1849, Jan. 15, 1974)

NOTE: The provisions of 52.1103 were suspended indefinitely at 40 FR 29714, July 15, 1975.

(12.0) 52.1104 Carpool Commuter Matching System.

(a) Definitions:

(1) "Carpool" means two or more persons utilizing the same vehicle.

(2) "Carpool matching" means assembling lists of commuters sharing

similar travel needs and providing a mechanism by which persons on such lists may be put in contact with each other for the purpose of forming carpools.

(3) "Time-origin-destination (TOD) information" means information that identifies a commuter's work schedule, home and work location of other desired origins and destinations of trips (such as shopping or recreational trips).

(4) "Pilot program" means a program that is initiated on a limited basis for the purpose of facilitating a future full scale regional program.

(b) This section is applicable in the Metropolitan Baltimore Intrastate AQCR (the Region).

(c) Beginning June 1, 1975, the State of Maryland shall, unless exempted by the Administrator on the basis of a finding that equivalent service is being or will be provided by some other public or private entity, establish a computer-aided carpool matching system which is conveniently available at least to all employees of employers within the Region who employ 100 or more employees. The system shall as soon as practicable, be made available to employees of smaller employers. No later than June 1, 1974, the State of Maryland shall submit to the Administrator a program, legally adopted (through regulation or statute) by and legally binding on the State, providing for such a system. The program shall include:

(1) A method of collecting information which will include the following as a minimum:

(i) Provisions for each affected employee to receive an application form with a cover letter describing the matching program.

(ii) Provisions on each application for applicant identification of his TOD information, and the applicant's desire to drive only, ride only, or share driving.

(2) A computer method of matching information that will have provisions for locating each applicant's origin and destination within a grid system in the Region and matching applicants with identical origin and destination grids and compatible work schedules.

(3) A method for providing continuing service so that the master list of all applicants is retained and available for use by new applicants, applications are currently available, and the master list is periodically updated to remove applicants who have moved from the area served.

(4) An agency or agencies responsible for operating, overseeing and maintaining the carpool computer matching system.

(d) No later than January 1, 1975, a pilot program shall be initiated in the Region identified in paragraph (b) of this section in prepartion for the full implementation required under paragraph (c) of this section.

(38 FR 34253, Dec. 12, 1973)

(12.0) 52.1105 Employer's provision for mass transit priority incentives.

(a) Definitions:

(1) "Employee parking space" means any parking space reserved or provided by an employer for the use of his employees.

(b) This section is applicable in the Metropolitan Baltimore Intrastate AQCR (the Region).

(c) Each employer in the Region who maintains more than 700 employee parking spaces shall, on or before February 1, 1974, submit to the Administrator an adequate transit incentive program designed to encourage the use of mass transit and discourage the use of single-passenger automobiles by his employees. This program may contain provisions for subsidies to employees who use mass transit, reductions in the number of employee parking spaces, or surcharges on the use of such spaces by employees, provision of special charter buses or other modes of mass transit for the use of employees, preferential parking and other benefits to employees who travel to work by carpool and/or any other measure acceptable to the Administrator. By April 1, 1974, the Administrator shall approve such program for each employer if he finds it to be adequate, and shall disapprove it if he finds it not to be adequate. Notice of such approval or disapproval will be published in this Part 52.

(d) In order to be approvable by the Administrator, such program shall contain procedures whereby the employer will supply the Administrator with semiannual certified reports which shall show, at a minimum the following information:

(1) The number of employees at each of the employer's facilities within the Region on October 15, 1973, and as of the date of the report.

(2) The number of (i) free and (ii) non-free employee parking spaces provided by the employer at each such employment facility on October 15, 1973, and as of the date of the report.

(3) The number of employees regularly commuting to and from work by (i) private automobile, (ii) carpool, and (iii) mass tran-

it at each such employment facility on October 15, 1973, and as of the date of the report.

(4) Such other information as the Administrator may prescribe.

(e) If, after the Administrator has approved a transit incentive program, the employer fails to submit any reports in full compliance with paragraph (d) of this section, or if the Administrator finds that any such report has been intentionally falsified, or if the Administrator determines that the program is not in operation or is not providing adequate incentives for employee use of carpools and mass transit, the Administrator may revoke the approval of such plan. Such revocation shall constitute a disapproval.

(f) By April 1, 1974, the Administrator shall prescribe a transit incentive program for each employer to whom paragraph (c) of this section is applicable if such employer has not submitted a program. By June 1, 1974, the Administrator shall prescribe a transit incentive program for each employer to whom paragraph (c) of this section is applicable if the program submitted is not adequate. Within two months after any revocation pursuant to paragraph (e) of this section, the Administrator shall prescribe a transit incentive program for the affected employer. Any program prescribed by the Administrator shall be published in this Part 52.

(g) Each employer in the Region who maintains more than 70 employee parking spaces shall, on or before February 1, 1975, submit to the Administrator an adequate transit incentive program conforming to the requirements of paragraphs (c) and (d) of this section, except that in paragraph (d) of this section, the reference date of reports shall be October 15, 1974, rather than October 15, 1973. Each such program, when approved, shall be subject to revocation as provided in paragraph (e) of this section.

(h) By April 1, 1975, the Administrator shall prescribe a transit incentive program for each employer to which paragraph (g) of this section is applicable if such employer has not submitted a program. By June 1, 1975, the Administrator shall prescribe a transit incentive program for each employer to which paragraph (g) of this section is applicable if the program submitted is not adequate. Within two months after any revocation of any program of any employer pursuant to paragraph (e) of this section, the Administrator shall prescribe a transit incentive program for the affected employer. Any program prescribed by the Administrator shall be published in this Part 52.

(38 FR 34253, Dec. 13, 1973)

(12.0) 52.1106 Study and establishment of bikeways in the Baltimore area.

(a) Definitions:

(1) "Baltimore CBD" is defined as the area in the City of Baltimore, Maryland, enclosed by, but not including, Centre Street, Fallsway, Falls Avenue, Pratt Street, Greene Street, Franklin Street, and Eutaw Street.

(b) This regulation is applicable in the Metropolitan Baltimore Intrastate AQCR.

(c) The State of Maryland shall, according to the schedule set forth in paragraph (d) of this section, conduct a study of, and shall in that study recommend locations for exclusive bicycle lanes and bicycle parking facilities in the area described in paragraph (b) of this section. The study shall be made with a view toward maximum safety and security. The study shall include consideration of the physical designs for such lanes and parking facilities, and, of rules of the road for bicyclists and, to the extent that present rules must be modified because of bicycle lanes, new rules of the road for motorists. In conducting the study, opportunity shall be given for public comments and suggestions. The study shall recommend as large a network of new CBD (and return) orientated commuter bicycle lanes and bicycle parking facilities as is practicable within the area described in paragraph (b) of this section and shall recommend physical designs for said lanes and facilities. The networks shall contain at least 15 miles of exclusive bicycle lanes in each direction.

(d) The State of Maryland shall submit to the Administrator no later than March 1, 1974, a detailed compliance schedule showing the steps that will be taken to carry out the study required by paragraph (c) of this section. The compliance schedule shall at a minimum include:

(1) Designation of the agency responsible for conducting the study.

(2) A date for initiation of the study, which date shall be no later than May 1, 1974.

(3) A date for completion of the study, and submittal thereof to the Administrator, which date shall be no later than March 1, 1975.

(4) A detailed timetable describing the steps that must be taken and when these steps will be taken to ensure the timely submittal of any legislation needed to generally authorize establishment of bikeways and parking facilities in Maryland to the State legislature.

(e) On or before April 1, 1975, the Administrator shall submit to the State of Maryland his response to the study required by paragraph (c) of this section, and shall, in that response, either approve the route and parking facility location and designs recommended in the study, or shall designate alternative and/or additional route and parking facility locations and designs.

(f) The State of Maryland and such county and local jurisdictions as the State shall request to participate in the establishment of the networks (the State must request the participation of a county or local jurisdiction if the participation of that jurisdiction is necessary to the establishment of the lanes and other facilities required by this section) shall establish, according to the schedule set forth in the compliance schedule required by paragraph (g) of this section, bike lanes and parking facilities along the routes and in the locations approved or designated by the Administrator pursuant to paragraph (e) of this section.

(g) On or before June 1, 1975, the State of Maryland, and such county and local jurisdictions as the State has requested to participate (and are, therefore, required to participate by paragraph (f) of this section) shall submit to the Administrator compliance schedules which shall show in detail the steps which each governmental entity will take to establish the bike lanes and parking facilities required by this section. The schedule must include as a minimum the following:

(1) Each lane and parking facility must be identified with a date set for its establishment.

(2) The design, security and safety features of each lane and parking facility must be precisely described and shown to be in accord with the designs approved or designated by the Administrator pursuant to paragraph (e) of this section.

(3) A date must be set for the initiation of lane and parking construction, which date shall be no later than September 1, 1975.

(4) A date must be set for completion of 50 percent of lane and parking construction, which date shall be no later than February 1, 1976.

(5) A date must be set for completion of 100 percent of lane and parking construction, which date shall be no later than May 31, 1976.

(6) Designations must be made of the agencies responsible for guaranteeing the establishment of the lanes and facilities in accordance with the Administrator's response to the State study.

(7) Signed statements of the chief executives of all jurisdictions

involved in the establishment of the lanes and parking facilities required by this section, or their designees, must be submitted identifying the sources and amounts of funding for the programs required by this section, along with a timetable to ensure that proper funds will be available.

(h) No later than August 1, 1975, each governmental entity required by this section to establish bicycle lanes and/or parking facilities, shall submit to the Administrator legally adopted regulations sufficient to implement and enforce all of the requirements of this section.

(i) Notwithstanding paragraph (c) of this section, if prior to the completion and submittal of the study required by paragraph (c) of this section, the State of Maryland has good and reasonable cause, through public comment or otherwise, to believe that the maximum practicable network of bicycle lanes will be less than 15 miles, in each direction, the State shall so notify the Administrator and shall obtain his concurrence or nonconcurrence, and shall conduct the remainder of the study to assure that the network of lanes shall be that mileage specified by the Administrator. Notice pursuant to this paragraph (i) shall be given no later than the beginning of the ninth month of the study.

(51.21) 52.1107 Control of dry cleaning solvent evaporation.

(a) Definitions:

(1) "Dry cleaning operation" means that process by which an organic solvent is used in the commercial cleaning of garments and other fabric materials.

(2) "Organic solvents" means organic materials, including diluents and thinners, which are liquids at standard conditions and which are used as dissolvers, viscosity reducers, or cleaning agents.

(3) "Photochemically reactive solvent" means any solvent with an aggregate of more than 20 percent of its total volume composed of the chemical compounds classified below or which exceeds any of the following individual percentage composition limitations, as applied to the total volume of solvent.

(i) A combination of hydrocarbons, alcohols, aldehydes, esters, ethers, or ketones having an olefinic or cyclo-olefinic type of unsaturation; 5 percent;

(ii) A combination of aromatic compounds with 8 or more carbon atoms to the molecule except ethylbenzene: 8 percent;

(iii) A combination of ethylbenzene or ketones having branched hydrocarbon structures, trichloroethylene or toluene: 20 percent.

(b) This section is applicable to the Metropolitan Baltimore Intrastate AQCR.

(c) No person shall operate a dry cleaning operation using other than perchloroethylene, 1,1,1-trichloroethane, or saturated halogenated hydrocarbons unless the uncontrolled organic emissions from such operation are reduced at least 85 percent; Provided, That dry cleaning operations emitting less than 8 pounds per hour and less than 40 pounds per day of uncontrolled organic materials are exempt from the requirement of this section.

(d) If incineration is used as a control technique, 90 percent or more of the carbon in the organic emissions being incinerated must be oxidized to carbon dioxide.

(e) Any owner or operator of a source subject to this section shall achieve compliance with the requirements of paragraph (c) of this section by discontinuing the use of photochemically reactive solvents no later than May 31, 1974, or by controlling emissions as required by paragraphs (c) and (d) of this section by May 31, 1974.

(38 FR 34255, Dec. 12, 1973)

(12.0) 52.1108 Exclusive bus lanes for Baltimore suburbs and outlying areas.

(a) Definitions:

(1) "Carpool" means a vehicle containing three or more persons.

(2) "Bus/carpool lane" means a lane on a street or highway, which lane is open only to buses (or buses and carpools), whether constructed specially for that purpose or converted from existing lanes.

(3) "Baltimore CBD" means the area in the City of Baltimore, Maryland, enclosed by, but not including, Centre Street, Fallsway, Falls Avenue, Pratt Street, Greene Street, Franklin Street, and Eutaw Street.

(b) The State of Maryland and such county and local jurisdictions as the State may request to participate (the State must request the participation of a county or local jurisdiction by December 15, 1974, if the participation of that jurisdiction is necessary to the establishment of the lanes required by this section) shall establish, according to the schedule in paragraph (f) of this section, bus/carpool lanes along corridors connecting at least the following suburban or outlying areas (or alternative areas if indicated in the study required by paragraph (c) of this section and approved by the Administrator) to the Baltimore CBD:

(1) Catonsville, Maryland
(2) Towson, Maryland
(3) Pikesville, Maryland
(4) Middle River and Essex, Maryland
(5) Overlea and Parkville, Maryland
(6) Halethorpe, Maryland
(7) Baynesville, Maryland
(8) Mount Washington section, Baltimore, Maryland
(9) Dundalk, Maryland
(10) Randallstown, Maryland
(11) Hunting Ridge section, Baltimore, Maryland
(12) Linthicum, Maryland
(13) Sparrows Point, Maryland

For each route either approved or designated by the Administrator pursuant to paragraph (d) of this section, except the route between the Baltimore CBD and Sparrows Point, at least one bus/carpool lane shall be established to serve traffic traveling toward the Baltimore CBD from 6:30 to 9:30 a.m. (or for a longer time), and at least one bus/carpool lane shall be established to serve traffic traveling toward the suburban or outlying areas from 3:30 to 6:30 p.m. (or for a longer time), Monday through Saturday. Along the route between the Baltimore CBD and Sparrows Point, Maryland, at least one bus/carpool lane shall be established to serve traffic traveling toward the Baltimore CBD from 3:30 to 6:30 p.m. (or for a longer time), Monday through Saturday.

(c) On or before November 1, 1974, the State of Maryland shall submit to the Administrator a study which shall contain for each of the corridors described in paragraph (b) of this section a detailed analysis showing every specific route location considered by the State for the corridor. The study shall designate one of the specific routes examined for each corridor as the most practicable route for that corridor. The study shall fully present the advantages and disadvantages of establishing the bus/carpool lanes provided for in paragraph (b) of this section along the most practicable route. For any corridor identified in this section along which the State concludes that bus/carpool lanes are not feasible, the State shall designate a replacement corridor connecting the Baltimore CBD and another significant source of CBD-bound traffic along which bus/carpool lanes are feasible. An analysis of the substituted corridor shall be included similar to the analysis of the original corridor, to show the most practicable route for said bus/carpool lanes.

(d) On or before December 1, 1974, the Administrator shall submit to the State of Maryland his response to the study required by paragraph (c) of this section, and shall in that response, either approve the routes selected by the State as most practicable and feasible for bus/carpool lanes, or shall designate alternative routes on which bus/carpool lanes must be established.

(e) On or before February 1, 1975, the State of Maryland and such county and local jurisdictions as the State has requested to participate (and are, therefore, required by paragraph (b) of this section to establish lanes) shall submit to the Administrator compliance schedules which shall show in detail the steps which each governmental entity will take to establish the bus/carpool lanes required by this section, and to enforce the limitations on their use. In the compliance schedule submitted pursuant to this paragraph a governmental entity may designate limited segments of lanes which may be entered briefly by vehicles, otherwise excluded from such lanes, for reasons of safety or sound traffic planning. Such exceptions shall be subject to the approval of the Administrator. Special circumstances justifying the need for such an exception (such as the desire to allow an exclusive lane to be entered briefly by automobiles for purposes of making a turn) must be set forth in detail.

(f) Bus/carpool lanes must be prominently indicated by distinctive painted lines, pylons, signs or physical barriers. Twenty-five percent of the lane mileage for each of the governmental entities must be established and the needed signs installed by July 1, 1975; fifty percent by October 1, 1975; one hundred percent by January 1, 1976.

(g) A signed statement by the chief executive of each governmental entity establishing lanes, or his designee, shall be submitted to the Administrator no late than February 1, 1975, to identify the sources and amount of funds for all projects required by this section.

(h) No later than April 1, 1975, each governmental entity required by this section to establish lanes shall submit to the Administrator legally adoped regulations sufficient to implement and enforce all of the requirements of this section.

(38 FR 34255, Dec. 12, 1973)

(12.0) 52.1109 Regulation for limitation of public parking.

(a) Definitions:

(1) "On-street parking" means stopping a motor vehicle on any street, highway, or roadway (except for legal stops at or before intersections and as caution and safety require) whether or not a person remains in the vehicle.

(b) This section is applicable in the Metropolitan Baltimore Intrastate AQCR.

(c) Beginning May 1, 1975, each appropriate governmental entity shall prohibit on-street parking, Monday through Saturday, on all streets and highways over which it has ownership or control and which contain exclusive bus or bus/carpool lanes pursuant to 52.1108. The prohibition against on-street parking on any particular street or highway shall be only for the period during which such street or highway has a lane or lanes reserved for buses, and/or carpools. Momentary stopping for the pickup or discharge of passengers on exclusive bus or bus/carpool lanes at established passenger stops shall be permitted. No later than April 1, 1975, each governmental entity subject to the requirements of this section shall submit to the Administrator legally adopted regulations establishing such a prohibition program. At a minimum, such regulations must provide that vehicles parked inviolation of the prohibition shall be towed away and the owner shall be fined not less than $50 per violation.

(d) No later than February 1, 1975, governmental entities subject to this section shall submit to the Administrator detailed compliance schedules showing the steps they will take to establish and enforce the foregoing on-street parking limitation program, including statutory proposals and needed regulations that they will propose for adoption.

(38 FR 34256, Dec. 12, 1973)

(12.0) 52.1111 Management of parking supply.

(a) Definitions:

(1) "Parking facility" (also called "facility") means a lot, garage, building or structure, or combination or portion thereof, in or on which motor vehicles are temporarily parked.

(2) "Vehicle trip" means a single movement by a motor vehicle that originates or terminates at a parking facility.

(3) "Construction" means fabrication, erection, or installation of a parking facility, or any conversion of land, a building or structure, or portion thereof, for use as a facility.

(4) "Modification" means any change to a parking facility that increases or may increase the motor vehicle capacity of or the motor vehicle activity associated with such parking facility.

(5) "Commence" means to undertake a continuous program of onsite construction or modification.

(b) This section is applicable in the Metropolitan Baltimore Intrastate AQCR.

(c) The requirements of paragraphs (d) through (i) of this section are applicable to the following parking facilities in the area specified in paragraph (b) of this section, the construction or modification of which is commenced after January 1, 1975.

(1) Any new parking facility with parking capacity for 250 or more motor vehicles;

(2) Any parking facility that will be modified to increase parking capacity by 250 or more motor vehicles; and

(3) Any parking facility constructed or modified in increments which individually are not subject to review under paragraphs (c)(1) and/or (c)(2) of this section but which, when all such increments occurring since August 15, 1973, are added together, as a total would subject the facility to review under paragraphs (c)(1) and/or (c)(2) of this section.

(d) No person shall commence construction or modification of any facility subject to this section without first obtaining written approval from the Administrator or an agency designated by him; provided that this paragraph shall not apply to any proposed construction or modification for which a general construction contract was finally executed by all appropriate parties on or before January 1, 1975.

(e) No approval to construct or modify a facility shall be granted unless the applicant shows to the satisfaction of the Administrator or an agency approved by him that:

  (1) The design or operation of the facility will not cause a violation of the control strategy which is part of the applicable implementation plan and will be consistent with the plan's VMT reduction goals.

  (2) The emissions resulting from the design or operation of the facility will not prevent or interfere with the attainment or maintenance of any national ambient air quality standard at any time within 10 years from the date of application.

(f) Except to the extent that the Administrator or agency designated by him may waive any such requirement in writing, all applications for approval under this section shall include the following information:

  (1) Name and address of the applicant.

  (2) Location and description of the parking facility.

  (3) A proposed contruction schedule.

  (4) The normal hours of operation of the facility and the enterprises and activities that it serves.

  (5) The total motor vehicle capacity before and after the construction or modification of the facility.

  (6) The number of people using or engaging in any enterprises or activities that the facility will serve on daily basis and a peak hour basis.

  (7) A projection of the geographic areas in the community from which people and motor vehicles will be drawn to the facility. Such projection shall include date concerning the availability of mass transmit from such areas.

  (8) An estimate of the average and peak hour vehicle trip generation rates, before and after construction or modification of the facility.

  (9) An estimate of the effect of the facility on traffic pattern and flow.

  (10) An estimate of the effect of the facility on total VMT for the air quality control region.

  (11) Additional information, plans, specifications, or documents

as required by the Administrator.

(g) If the Administrator or agency designated by him specifically so requests, the application shall also include an analysis of the effect of the facility on site and regional air quality, including a showing that the facility will be compatible with the applicable implementation plan, and that the facility will not cause any national air quality standard to be exceeded within 10 years from the date of application. The Administrator may prescribe a standardized screening technique to be used in analyzing the effect of the facility on ambient air quality.

(h) Each application shall be signed by the owner or operator of the facility, whose signature shall constitute an agreement that the facility shall be operated in accordance with applicable rules, regulations, permit conditions, and the design submitted in the application.

(i) Within 30 days after receipt of an application, the Administrator or agency approved by him shall notify the public, by prominent advertisement in the region described in paragraph (b) of this section, of the receipt of the application and the proposed action on it (whether approval, conditional approval, or denial), and shall invite public comment.

(1) The application, all submitted information, and the terms of the proposed action shall be made available to the public in a readily accessible place within the area described in paragraph (b) of this section.

(2) Public comments submitted within 30 days of the date such information is made available shall be considered in making the final decision on the application.

(3) The Administrator or agency approved by him shall take final action (approval, conditional approval, or denial), on an application within 30 days after close of the public comment period.

(j) For any new parking facility with capacity for 50 to 249 motor vehicles, any facility which will be modified to increase parking capacity by 50 to 249 motor vehicles, and any facility constructed or modified in increments which individually are not subject to review under this paragraph, but which, when all such increments occurring since January 1, 1975, are added together, as a total would subject the facility to review under this paragraph, no person shall commence construction or modification without first furnishing to the Administrator or an agency designated by him the information required by paragraphs (f)(1) through (f)(5) of this section. No approval will be required by the Administrator unless the determination specified in paragraph (k) of this section is made. This paragraph shall not apply to any proposed construction or modification for which a general construction contract was finally executed by all appropriate parties on or before January 1, 1975.

(k) If the Administrator, or an agency designated by him, determines, and gives prominent public notice of such determination, that construction of parking lots of 50 to 249 spaces (or modification of parking lots to add 50 to 249 spaces) in any geographical subdivision of the area specified in paragraph (b) of this section, is having or is likely to have a significant detrimental effect on the control strategies in this transportation control plan or on air quality, he may require approval by him or an agency designated by him, pursuant to the procedures in paragraph (d) through (i) of this section prior to construction of any additional such lots in such a subdivision. The Administrator shall approve an application unless he determines that the facility to be constructed would, either in itself or when viewed as part of a pattern of development, have a significant adverse impact on the applicable transportation control strategy.

(38 FR 34256, Dec. 12, 1973, as amended at 39 FR 1849, Jan. 15, 1974)

NOTE: The provisions of 52.1111 were suspended indefinitely at 40 FR 29714, July 15, 1975. This section was correctly designated at 41 FR 23716, June 11, 1976.

(14.0) 52.1113 General requirements.

(b) Regulation for public availability of emission data.

(1) Any person who cannot obtain emission data from the Agency responsible for making emission data available to the public, as specified in the applicable plan, concerning emissions from any source subject to emission limitations which are part of the approved plan may request that the appropriate Regional Administrator obtain and make public such data. Within 30 days on the nature and amounts of emissions from such source and any other information as may be deemed necessary by the Regional Administrator to determine whether such source is in compliance with applicable emission limitations or other control measures that are part of the applicable plan.

(2) Commencing after the initial notification by the Regional Administrator pursuant to paragraph (b)(1) of this section, the owner or operator of the source shall maintain records of the nature and amounts of emissions from such source and any other information as may be deemed necessary by the Regional Adminstrator to determine whether such source is in compliance with applicable emission limitations or other control measures that are part of the plan. The information recorded shall be summarized and reported to the Regional Administrator, on forms furnished by the Regional Administrator, and shall be submitted within 45 days after the end of the reporting period. Reporting periods are January 1-June 30 and July 1-December 31.

(3) Information recorded by the owner or operator and copies of this summarizing report submitted to the Regional Administrator shall be retained by the owner or operator for 2 years after the date on which the pertinent report is submitted.

(4) Emission data obtained from owners or operators of stationary sources will be correlated with applicable emission limitations and other control measures that are part of the applicable plan and will be available at the appropriate regional office and at other locations in the state designated by the Regional Administrator.

(39 FR 32536, Sept. 26, 1974, as amended at 40 FR 55329, Nov. 28, 1975.)

(17.0) 52.1116 Prevention of Significant Deterioration

(b) Definitions. For the purposes of this section:

(1) "Facility" means an identifiable piece of process equipment. A stationary source is composed of one or more pollutant-emitting facilities.

(2) The phrase "Administrator" means the Administrator of the Environmental Protection Agency or his designated representative.

(3) The phrase "Federal Land Manager" means the head, or his designated representative, of any Department or Agency of the Federal Government which administers federally-owned land, including public domain lands.

(4) The phrase "Indian Reservation" means any federally-recognized reservation established by Treaty, Agreement, Executive Order, or Act of Congress.

(5) The phrase "Indian Governing Body" means the governing body of any tribe, band, or group of Indians subject to the jurisdiction of the United States and recognized by the United States as possessing power of self-government.

(6) "Construction" means fabrication, erection or installation of a stationary source.

(7) "Commenced" means that an owner or operator has undertaken a continuous program of construction or modification or that an owner or operator has entered into a contractual obligation to undertake and complete, within a reasonable time, a continuous program of construction or modification.

(c) Area designation and deterioration increment

(1) The provisions of this paragraph have been incorporated by reference into the applicable implementation plans for various States, as provided in Subparts B through DDD of this part. Where this paragraph is so incorporated, the provisions shall also be applicable to all lands owned by the Federal Government and Indian Reservations located in such State. The provisions of this paragraph do not apply in those counties or other functionally equivalent areas that pervasively exceeded any national ambient air quality standards during 1974 for sulfur dioxide or particulate matter and then only with respect to such pollutants. States may notify the Administrator at any time of those areas which exceeded the national standards during 1974 and therefore are exempt from the requirements of this paragraph.

(2) (i) For purposes of this paragraph, areas designated as Class I or II shall be limited to the following increases in pollutant concentration occurring since January 1, 1975:

Area Designations

Pollutant	Class I (ug/m^3)	Class II (ug/m^3)
Particulate matter:		
Annual geometric mean	5	10
24-hr maximum	10	30
Sulfur dioxide:		
Annual arithmetic mean	2	15
24-hr maximum	5	100
3-hr maximum	25	700

(ii) For purposes of this paragraph, areas designated as Class III shall be limited to concentrations of particulate matter and sulfur dioxide no greater than the national ambient air quality standards.

(iii) The air quality impact of sources granted approval to construct or modify prior to January 1, 1975 (pursuant to the approved new source review procedures in the plan) but not yet operating prior to January 1, 1975, shall not be counted against the air quality increments specified in paragraph (c) (2) (i) of this section.

(3) (i) All areas are designated Class II as of the effective date of this paragraph. Redesignation may be proposed by the respective States, Federal Land Manager, or Indian Governing Bodies, as provided below, subject to approval by the Administrator.

(ii) The State may submit to the Administrator a proposal to redesignate areas of the State Class I, Class II, or Class III, provided that:

(a) At least one public hearing is held in or near the area affected and this public hearing is held in accordance with procedures established in 51.4 of this chapter, and

(b) Other States, Indian Governing Bodies, and Federal Land Managers whose lands may be affected by the proposed redesignation are notified at least 30 days prior to the public hearing, and

(c) A discussion of the reasons for the proposed redesignation is available for public inspection at least 30 days prior to the hearing and the notice announcing the hearing contains appropriate notification of the availability of such discussion, and

(d) The proposed redesignation is based on the record of the State's hearing, which must reflect the basis for the proposed redesignation, including consideration of (1) growth anticipated in the area, (2) the social, environmental, and economic effects of such redesignation upon the area being proposed for redesignation and upon other areas and States, and (3) any impacts of such proposed redesignation upon regional or national interests.

(e) The redesignation is proposed after consultation with the elected leadership of local and other substate general purpose governments in the area covered by the proposed redesignation.

(iii) Except as provided in paragraph (c) (3) (iv) of this section, a State in which lands owned by the Federal Government are located may submit to the Administrator a proposal to redesignate such lands Class I, Class II, or Class III in accordance with subdivision (ii) of this subparagraph provided that:

(a) The redesignation is consistent with adjacent State and privately owned land, and

(b) Such redesignation is proposed after consultation with the Federal Land Manager.

(iv) Notwithstanding subdivision (iii) of this subparagraph, the Federal Land Manager may submit to the Administrator a proposal to redesignate any Federal lands to a more restrictive designation than would otherwise be applicable provided that:

(a) The Federal Land Manager follows procedures equivalent to those required of States under paragraph (c) (3) (ii) and,

(b) Such redesignation is proposed after consultation with the State(s) in which the Federal Land is located or which border the Federal Land.

(v) Nothing in this section is intended to convey authority to the States over Indian Reservations where States have not assumed such authority under other laws nor is it intended to deny jurisdiction which States have assumed under other laws. Where a State has not assumed jurisdiction over an Indian Reservation the appropriate Indian Governing Body may submit to the Administrator a proposal to redesignate areas Class I, Class II, or Class III, provided that:

(a) The Indian Governing Body follows procedures equivalent to those required of States under paragraph (c) (3) (ii) and,

(b) Such redesignation is proposed after consultation with the State(s) in which the Indian Reservation is located or which border the Indian Reservation and, for those lands held in trust, with the approval of the Secretary of the Interior.

(vi) The Administrator shall approve, within 90 days, any redesignation proposed pursuant to this subparagraph as follows:

(a) Any redesignation proposed pursuant to subdivisions (ii) and (iii) of this subparagraph shall be approved unless the Administrator determines (1) that the requirements of subdivisions (ii) and (iii) of this subparagraph have not been complied with, (2) that the State has arbitrarily and capriciously disregarded relevant considerations set forth in subparagraph (3) (ii) (d) of this paragraph, or (3) that the State has not requested and received delegation of responsibility for carrying out the new source review requirements of paragraphs (d) and (e) of this section.

(b) Any redesignation proposed pursuant to subdivision (iv) of this subparagraph shall be approved unless he determines (1) that the requirements of subdivision (iv) of this subparagraph have not been complied with, or (2) that the Federal Land Manager has arbitrarily and capriciously disregarded relevant considerations set forth in subparagraph (3) (ii) (d) of this paragraph.

(c) Any redesignation submitted pursuant to subdivision (v) of this subparagraph shall be approved unless he determines (1) that the requirements of subdivision (v) of this subparagraph have not been complied with, or (2) that the Indian Governing Body has arbitrarily and capriciously disregarded relevant considerations set forth in subparagraph (3) (ii) (d) of this paragraph.

(d) Any redesignation proposed pursuant to this paragraph shall be approved only after the Administrator has solicited written comments from affected Federal agencies and Indian Governing Bodies and from the public on the proposal.

(e) Any proposed redesignation protested to the proposing State, Indian Governing Body, or Federal Land Manager and to the Administrator by another State or Indian Governing Body because of the effects upon such protesting State or Indian Reservation shall be approved by the Administrator only if he determines that in his judgment the redesignation appropriately balances considerations of growth anticipated in the area proposed to be redesignated; the social, environmental and economic effects of such redesignation upon the area being redesignated and upon other areas and States; and any impacts upon regional or national interests.

(f) The requirements of paragraph (c) (3) (vi) (a) (3) that a State request and receive delegation of the new source review requirements of this section as a condition to approval of a proposed redesignation, shall include as a minimum receiving the administrative and technical functions of the new source review. The Administrator will carry out any required enforcement action in cases where the State does not have adequate legal authority to initiate such actions. The Administrator may waive the requirements of paragraph (c) (3) (vi) (a) (3) if the State Attorney-General has determined that the State cannot accept delegation of the administrative/technical functions.

(vii) If the Administrator disapproves any proposed area designation under this subparagraph, the State, Federal Land Manager or Indian Governing Body, as appropriate, may resubmit the proposal after correcting the deficiencies noted by the Administrator or reconsidering any area designation determined by the Administrator to be arbitrary and capricious.

(d) Review of new sources

(1) The provisions of this paragraph have been incorporated by reference into the applicable implementation plans for various States, as provided in Subparts B through DDD of this part. Where this paragraph is so incorporated, the requirements of this paragraph apply to any new or modified stationary source of the type identified below which has not commenced construction or modification prior to June 1, 1975 except as specifically provided below. A

source which is modified, but does not increase the amount of sulfur oxides or particulate matter emitted, or is modified to utilize an alternative fuel, or higher sulfur content fuel, shall not be subject to this paragraph.

(i) Fossil-Fuel Steam Electric Plants of more than 1000 million B.T.U. per hour heat input.

(ii) Coal Cleaning Plants.

(iii) Kraft Pulp Mills.

(iv) Portland Cement Plants.

(v) Primary Zinc Smelters.

(vi) Iron and Steel Mills.

(vii) Primary Aluminum Ore Reduction Plants.

(viii) Primary Copper Smelters.

(ix) Municipal Incinerators capable of charging more than 250 tons of refuse per 24 hour day.

(x) Sulfuric Acid Plants.

(xi) Petroleum Refineries.

(xii) Lime Plants.

(xiii) Phosphate Rock Processing Plants.

(xiv) By-Product Coke Oven Batteries.

(xv) Sulfur Recovery Plants.

(xvi) Carbon Black Plants (furnace process).

(xvii) Primary Lead Smelters.

(xviii) Fuel Conversion Plants.

(xix) Ferroalloy production facilities commencing construction after October 5, 1975.

(2) No owner or operator shall commence construction or modification of a source subject to this paragraph unless the Administrator determines that, on the basis of information submitted pursuant to subparagraph (3) of this paragraph:

(i) The effect on air quality concentration of the source or modified source, in conjunction with the effects of growth and reduction in emissions after January 1, 1975, of other sources in the area affected by the proposed source, will not violate the air quality increments applicable in the area where the source will be located nor the air quality increments applicable in any other areas. The analysis of emissions growth and reduction after January 1, 1975, of other sources in the areas affected by the proposed source shall include all new and modified sources granted approval to construct pursuant to this paragraph; reduction in emissions from existing sources which contributed to air quality during all or part of 1974; and general commercial, residential, industrial, and other sources of emissions growth not exempted by paragraph (c) (2) (111) of this section which has occurred since January 1, 1975.

(ii) The new or modified source will meet an emission limit, to be specified by the Administrator as a condition to approval, which represents that level of emission reduction which would be achieved by the application of best available control technology, as defined in 52.01 (f), for particulate matter and sulfur dioxide. If the Administrator determines that technological or economic limitations on the application of measurement methodology to a particular class of sources would make the imposition of an emission standard infeasible, he may instead prescribe a design or equipment standard requiring the application of best available control technology. Such standard shall to the degree possible set forth the emission reductions achievable by implementation of such design or equipment, and shall provide for compliance by means which achieve equivalent results.

(iii) With respect to modified sources, the requirements of subparagraph (2) (ii) of this paragraph shall be applicable only to the facility or facilities from which emissions are increased.

(3) In making the determinations required by paragraph (d) (2) of this section, the Administrator shall, as a minimum, require the owner or operator of the source subject to this paragraph to submit: site information, plans, description, specifications, and drawings showing the design of the source; information necessary to determine the impact that the construction or modification will have on sulfur dioxide and particulate matter air quality levels; and any other information necessary to determine that best available control technology will be applied. Upon request of the Administrator, the owner or operator of the source shall provide information on the nature and extent of general commercial, residential, industrial, and other growth which has occurred in the area affected by the source's emissions (such area to be specified by the

Administrator) since January 1, 1975.

(4) (i) Where a new or modified source is located on Federal Lands, such source shall be subject to the procedures set forth in paragraphs (d) and (e) of this section. Such procedures shall be in addition to applicable procedures conducted by the Federal Land Manager for administration and protection of the affected Federal Lands. Where feasible, the Administrator will coordinate his review and hearings with the Federal Land Manager to avoid duplicate administrative procedures.

(ii) New or modified sources which are located on Indian Reservations shall be subject to procedures set forth in paragraphs (d) and (e) of this section. Such procedures shall be administered by the Administrator in cooperation with the Secretary of the Interior with respect to lands over which the State has not assumed jurisdiction under other laws.

(iii) Whenever any new or modified source is subject to action by a Federal Agency which might necessitate preparation of an environmental impact statement pursuant to the National Environmental Policy Act (42 U.S.C. 4321), review by the Administrator conducted pursuant to this paragraph shall be coordinated with the broad environmental reviews under that Act, to the maximum extent feasible and reasonable.

(5) Where an owner or operator has applied for permission to construct or modify pursuant to this paragraph and the proposed source would be located in an area which has been proposed for redesignation to a more stringent class (or the State, Indian Governing Body, or Federal Land Manager has announced such consideration), approval shall not be granted until the Administrator has acted on the proposed redesignation.

(e) Procedures for public participation

(1) (i) Within 20 days after receipt of an application to construct, or any addition to such application, the Administrator shall advise the owner or operator of any deficiency in the information submitted in support of the application. In the event of such a deficiency, the date of receipt of the application for the purpose of paragraph (e) (1) (ii) of this section shall be the date on which all required information is received by the Administrator.

(ii) Within 30 days after receipt of a complete application, the Administrator shall:

(a) Make a preliminary determination whether the source should be approved, approved with conditions, or disapproved.

(b) Make available in at least one location in each region in which the proposed source would be constructed, a copy of all materials submitted by the owner or operator, a copy of the Administrator's preliminary determination and a copy or summary of other materials, if any, considered by the Administrator in making his preliminary determination; and

(c) Notify the public, by prominent advertisement in newspaper of general circulation in each region in which the proposed source would be constructed, of the opportunity for written public comment on the information submitted by the owner or operator and the Administrator's preliminary determination on the approvability of the source.

(iii) A copy of the notice required pursuant to this subparagraph shall be sent to the applicant and to officials and agencies having cognizance over the locations where the source will be situated as follows: State and local air pollution control agencies, the chief executive of the city and county; any comprehensive regional land use planning agency; and any State, Federal Land Manager or Indian Governing Body whose lands will be significantly affected by the source's emissions.

(iv) Public comments submitted in writing within 30 days after the date such information is made available shall be considered by the Administrator in making his final decision on the application. No later than 10 days after the close of the public comment period, the applicant may submit a written response to any comments submitted by the public. The Administrator shall consider the applicant's response in making his final decision. All comments shall be made available for public inspection in at least one location in the region in which the source would be located.

(v) The Administrator shall take final action on an application within 30 days after the close of the public comment period. The Administrator shall notify the applicant in writing of his approval, conditional approval, or denial of the application, and shall set forth his reasons for conditional approval or denial. Such notification shall be made available for public inspection in at least one location in the region in which the source would be located.

(vi) The Administrator may extend each of the time periods specified in paragraph (e) (1) (ii), (iv), or (v) of this section by no more than 30 days or such other period as agreed to by the applicant and the Administrator.

(2) Any owner or operator who constructs, modifies, or operates a stationary source not in accordance with the application, as approved and conditioned by the Administrator, or any owner or operator of a stationary source subject to this paragraph who commences construction or modification after June 1, 1975, without applying for and receiving approval hereunder, shall be subject to enforcement action under section 113 of the Act.

(3) Approval to construct or modify shall become invalid if construction or expansion is not commenced within 18 months after receipt of such approval or if construction is discontinued for a period of 18 months or more. The Administrator may extend such time period upon a satisfactory showing that an extension is justified.

(4) Approval to construct or modify shall not relieve any owner or operator of the responsibility to comply with the control strategy and all local, State, and Federal regulations which are part of the applicable State Implementation Plan.

(f) Delegation of authority

(1) The Administrator shall have the authority to delegate responsibility for implementing the procedures for conducting source review pursuant to paragraphs (d) and (e), in accordance with subparagraphs (2), (3), and (4) of this paragraph.

(2) Where the Administrator delegates the responsibility for implementing the procedures for conducting source review pursuant to this section to any Agency, other than a regional office of the Environmental Protection Agency, the following provisions shall apply:

(i) Where the agency designated is not an air pollution control agency, such agency shall consult with the appropriate State and local air pollution control agency prior to making any determination required by paragraph (d) of this section. Similarly, where the agency designated does not have continuing responsibilities for managing land use, such agency shall consult with the appropriate State and local agency which is primarily responsible for managing land use prior to making any determination required by paragraph (d) of this section.

(ii) A copy of the notice pursuant to paragraph (e) (1) (ii) (c) of this section shall be sent to the Administrator through the appropriate regional office.

(3) In accordance with Executive Order 11752, the Administrator's authority for implementing the procedures for conducting source review pursuant to this section shall not be delegated, other than to a regional office of the Environmental Protection Agency, for new or modified sources which are owned or operated by the Federal government or for new or modified sources located on Federal lands; except that, with respect to the latter category, where new or modified sources are constructed or operated on Federal lands pursuant to leasing or other Federal agreements, the Federal land Manager may at his discretion, to the extent permissible under applicable statutes and regulations, require the lessee or permittee to be subject to a designated State or local agency's procedures developed pursuant to paragraphs (d) and (e) of this section.

(4) The Administrator's authority for implementing the procedures for conducting source review pursuant to this section shall not be redelegated, other than to a regional office of the Environmental Protection Agency, for new or modified sources which are located on Indian reservations except where the State has assumed jurisdiction over such land under other laws, in which case the Administrator may delegate his authority to the States in accordance with subparagraphs (2), (3), and (4) of this paragraph.

(39 FR 42514, Dec. 5, 1974; 40 FR 2802, Jan. 16, 1975, as amended at 40 FR 24535, June 9, 1975; 40 FR 25005, June 12, 2975; 40 FR 42012, Sept. 10, 1975)